SWITCHBLADE 5/6

SICKLE BAR

Published 03/12

Part No. 02982612C

OPERATOR'S MANUAL

This Operator's Manual is an integral part of the safe operation of this machine and must be maintained with the unit at all times. READ, UNDERSTAND, and FOLLOW the Safety and Operation Instructions contained in this manual before operating the equipment. *C01-Cover*

ALAMO INDUSTRIAL®

1502 E. Walnut
Seguin, Texas 78155
830-372-3551
Email: parts@alamo-industrial.com

¡ATENCIÓN!
LEA EL INSTRUCTIVO

Si No Lee Ingles, Pida
Ayuda a Alguien
Que Se Lo Lea Para Que le
Traduzca Las
Medidas de Seguridad

MEMBER OF THE ALAMO GROUP
ALWAYS ON THE CUTTING EDGE®

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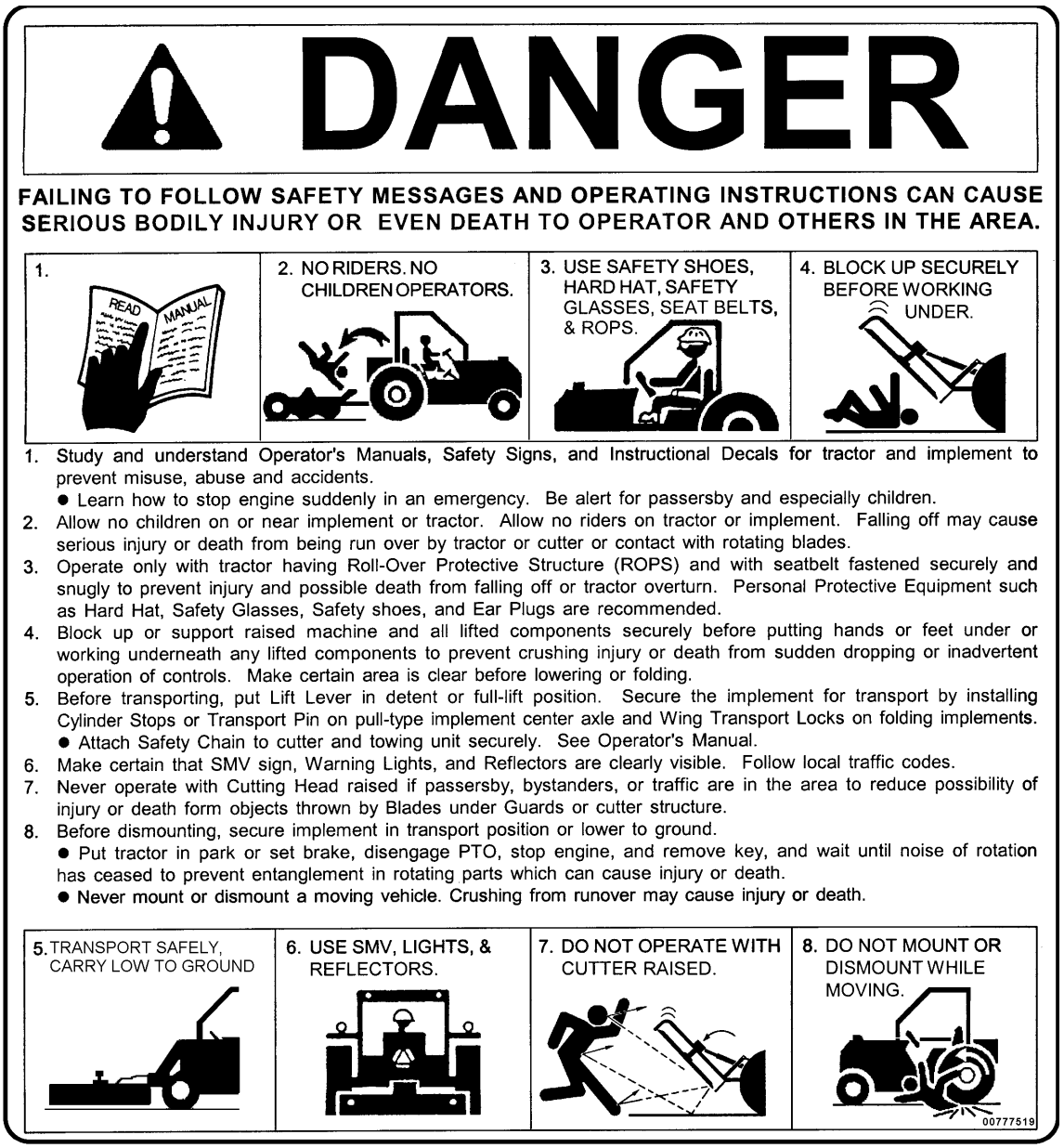
$0.00

To the Owner/Operator/Dealer

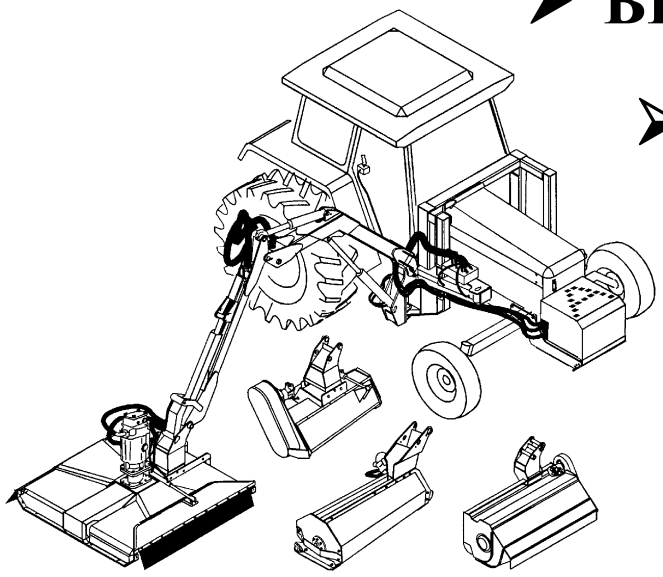
All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

BEFORE YOU START! Read the safety messages on the implement and shown in your manual. Observe the rules of safety and common sense!


DANGER
FAILING TO FOLLOW SAFETY MESSAGES AND OPERATING INSTRUCTIONS CAN CAUSE SERIOUS BODILY INJURY OR EVEN DEATH TO OPERATOR AND OTHERS IN THE AREA.
1.
READ
MANUAL
2. NO RIDERS. NO CHILDREN OPERATORS.
3. USE SAFETY SHOES, HARD HAT, SAFETY GLASSES, SEAT BELTS, & ROPS.
4. BLOCK UP SECURELY BEFORE WORKING UNDER.
1. Study and understand Operator's Manuals, Safety Signs, and Instructional Decals for tractor and implement to prevent misuse, abuse and accidents.
● Learn how to stop engine suddenly in an emergency. Be alert for passersby and especially children.
2. Allow no children on or near implement or tractor. Allow no riders on tractor or implement. Falling off may cause serious injury or death from being run over by tractor or cutter or contact with rotating blades.
3. Operate only with tractor having Roll-Over Protective Structure (ROPS) and with seatbelt fastened securely and snugly to prevent injury and possible death from falling off or tractor overturn. Personal Protective Equipment such as Hard Hat, Safety Glasses, Safety shoes, and Ear Plugs are recommended.
4. Block up or support raised machine and all lifted components securely before putting hands or feet under or working underneath any lifted components to prevent crushing injury or death from sudden dropping or inadvertent operation of controls. Make certain area is clear before lowering or folding.
5. Before transporting, put Lift Lever in detent or full-lift position. Secure the implement for transport by installing Cylinder Stops or Transport Pin on pull-type implement center axle and Wing Transport Locks on folding implements.
● Attach Safety Chain to cutter and towing unit securely. See Operator's Manual.
6. Make certain that SMV sign, Warning Lights, and Reflectors are clearly visible. Follow local traffic codes.
7. Never operate with Cutting Head raised if passersby, bystanders, or traffic are in the area to reduce possibility of injury or death form objects thrown by Blades under Guards or cutter structure.
8. Before dismounting, secure implement in transport position or lower to ground.
● Put tractor in park or set brake, disengage PTO, stop engine, and remove key, and wait until noise of rotation has ceased to prevent entanglement in rotating parts which can cause injury or death.
● Never mount or dismount a moving vehicle. Crushing from runover may cause injury or death.
5. TRANSPORT SAFELY, CARRY LOW TO GROUND
6. USE SMV, LIGHTS, & REFLECTORS.
7. DO NOT OPERATE WITH CUTTER RAISED.
8. DO NOT MOUNT OR DISMOUNT WHILE MOVING.
00777519

WARRANTY INFORMATION:

Read and understand the complete Warranty Statement found in this Manual. Fill out the Warranty Registration Form in full and return it to within 30 Days. Make certain the Serial Number of the Machine is recorded on the Warranty Card and on the Warranty Form that you retain.



➢ BE SAFE!

➢ BE ALERT!

➢ BE ALIVE!

➢ BE TRAINED
before operating the Mower!

ALAMO INDUSTRIAL

Safety Training Makes the Difference

In order to reduce accidents and enhance the safe operation of mowers, *Alamo Industrial,* in cooperation with other industry manufacturers has developed the AEM/FEMA Industrial and Agricultural Mower Safety Practices video and guide book.

The video will familiarize and instruct mower-tractor operators in safe practices when using industrial and agricultural mowing equipment. It is important that Every Mower Operator be educated in the operation of their mowing equipment and be able to recognize the potential hazards that can occur while operating a mower. This video, along with the mower operator's manual and the warning messages on the mower, will significantly assist in this important education.

Your Authorized *Alamo Industrial* Dealer may have shown this video and presented you a DVD Video when you purchased your mower. If you or any mower operator have not seen this video, **Watch** the **Video, Read** this **Operator's Manual,** and **Complete** the **Video Guidebook** before operating your new mower. If you do not understand any of the instructions included in the video or operator's manual or if you have any questions concerning safety of operation, contact your supervisor, dealer or *Alamo Industrial*.

If you would like a VHS video tape of the video, please email AEMVideo@alamo-group.com or Fax AEM VHS Video at (830) 372-9529 or mail in a completed copy of the form on the back of this page to AEM VHS Video 1502 E Walnut Street, Seguin, TX 78155. and request the VHS video version. Please include your name, mailing address, mower model and serial number.

Every operator should be trained for each piece of equipment (Tractor and Mower), understand the intended use, and the potential hazards before operating the equipment.

Alamo Industrial Division is willing to provide one (1) AEM Mower Safety Practices Video

Please Send Me: ☐ VHS Format – AEM/FEMA Mower Operator Safety Video

☐ DVD Format – AEM/FEMA Mower Operator Safety Video

☐ Mower Operator's Manual

☐ AEM Mower Operator's Safety Manual

Requester Name:_____Phone:_____

Requester Address:_____

City:_____

State:_____

Zip Code:_____

Mower Model: _____Serial Number:_____

Date Purchased:_____ Dealer Salesperson:_____

Dealership Name:_____Dealership Location:_____

Mail to:

AEM Video Services

1502 E Walnut street

Seguin, TX 78155

Or Fax to:

(830) 372-9529

Or Email to:

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SAFETY SECTION

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SAFETY

General Safety Instructions and Practices

A careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these Safety Messages before assembling, operating or servicing this Implement. This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know how to do so responsibly.

The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.

Practice all usual and customary safe working precautions and above all---remember safety is up to YOU. Only YOU can prevent serious injury or death from unsafe practices.

⚠ DANGER Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.

⚠ WARNING Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.

⚠ CAUTION Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.

Important Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

NOTE: *Identifies points of particular interest for more efficient and convenient operation or repair.* (SG-1)

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2)

⚠ PELIGRO Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3)

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SAFETY

⚠ DANGER

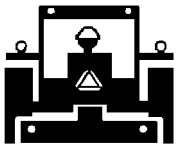
Never operate the Tractor or Implement until you have read and completely understand this Manual, the Tractor Operator's Manual, and each of the Safety Messages found in the Manual or on the Tractor and Implement. Learn how to stop the tractor engine suddenly in an emergency. Never allow inexperienced or untrained personnel to operate the Tractor or Implement without supervision. Make sure the operator has fully read and understood the manuals prior to operation. (SG-4)

⚠WARNING

Always maintain the safety signs in good readable condition. If the safety signs are missing, damaged, or unreadable, obtain and install replacement safety signs immediately. (SG-5)

⚠WARNING

Make certain that the "Slow Moving Vehicle" (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights and follow all local traffic regulations. (SG-6)



⚠WARNING

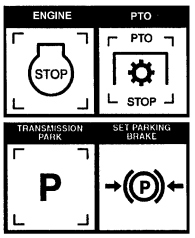
Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. Serious injury or even death could result from falling off the tractor--particularly during a turnover when the operator could be pinned under the ROPS. (SG-7)

⚠WARNING

Do not modify or alter this Implement. Do not permit anyone to modify or alter this Implement, any of its components or any Implement function. (SG-8)

⚠ DANGER

BEFORE leaving the tractor seat lower the implement, set the parking brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only. (SG-9)



⚠ DANGER

Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)

SAFETY

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SAFETY

⚠ DANGER

Never allow children to operate, ride on, or come close to the Tractor or Implement. Usually, 16-17 year-old children who are mature and responsible can operate the implement with adult supervision, if they have read and understand the Operator's Manuals, been trained in proper operation of the tractor and Implement, and are physically large enough to reach and operate the controls easily. (SG-11)

⚠ WARNING

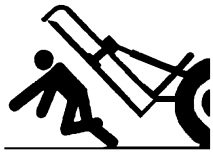
Do not mount or dismount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. (SG-12)

⚠ DANGER

Start tractor only when properly seated in the Tractor seat. Starting a tractor in gear can result in injury or death. Read the Tractor operators manual for proper starting instructions. (SG-13)

⚠ DANGER

Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (SG-14)



⚠ WARNING

Do not operate this Equipment with hydraulic oil or fuel leaking. Oil and fuel are explosive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the unit ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use Cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15)

⚠ WARNING

The operator and all support personnel should wear hard hats, safety shoes, safety glasses, and proper hearing protection at all times for protection from injury including injury from items that may be thrown by the equipment. (SG-16)

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⚠ CAUTION

PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Tractors with or without an Implement attached can often be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the Operator's position exceeds 80db. Noise over 85db over an extended period of time will cause severe hearing loss. Noise over 90db adjacent to the Operator over an extended period of time will cause permanent or total hearing loss. ***NOTE:*** *Hearing loss from loud noise [from tractors, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery.* (SG-I7)

⚠WARNING

Never attempt to lubricate, adjust, or remove material from the Implement while it is in motion or while tractor engine is running. (SG-20)

⚠WARNING

Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)

⚠WARNING

Do not put hands or feet near the cutter bar. Blade contact can result in serious injury. Stay away until all motion has stopped and the mower is securely blocked up. (SSM-1)

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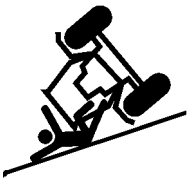
SAFETY

WARNING Transport only at speeds where you can maintain control of the equipment. Serious accidents and injuries can result from operating this equipment at high speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.

Before transporting the Tractor and Implement, determine the proper transport speeds for you and the equipment. Make sure you abide by the following rules:

Test the tractor at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum transport speed not to exceed 20 mph (30 kph) for transporting this equipment.

Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that the equipment can be operated at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum turning speed for you and this equipment before operating on roads or uneven ground.



Only transport the Tractor and Implement at the speeds which allow you to properly control the equipment.

Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes or worn tires. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)

WARNING Always read carefully and comply fully with the manufacturer's instructions when handling oil, solvents, cleansers, and any other chemical agent. (SG-22)

DANGER Never run the Tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SG-23)

DANGER KEEP AWAY FROM ROTATING ELEMENTS to prevent entanglement and possible serious injury or death. (SG-24)

DANGER Never allow children to play on or around Tractor or Implement. Children can slip or fall off the Equipment and be injured or killed. Inadvertent contact with controls can cause the Implement to shift or fall crushing themselves or others. (SG-25)

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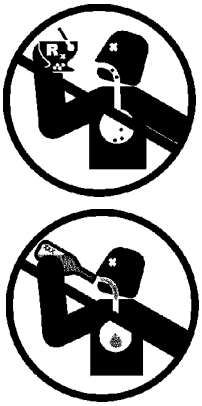
⚠ DANGER

DO NOT use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27)



⚠ DANGER

Operate the Tractor and/or Implement controls only while properly seated in the Tractor seat with the seat belt securely fastened around you. Inadvertent movement of the Tractor or Implement may cause serious injury or death. (SG-29)

⚠WARNING

Mow only in conditions where you have clear visibility in daylight or with adequate artificial lighting. Never mow in darkness or foggy conditions where you cannot clearly see at least 300 feet (90 m) in front and to the sides of the tractor and mower. Make sure that you can clearly see and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects. If you are unable to clearly see these type of items discontinue mowing. (SGM-1)

⚠WARNING

Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. (SG-30)

⚠WARNING

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. (SG-31)

⚠WARNING

Extreme care should be taken when operating near loose objects such as gravel, rocks, wire, and other debris. Inspect the area before mowing. Foreign objects should be removed from the site to prevent machine damage and/or bodily injury or even death. Any objects that cannot be removed must be clearly marked and carefully avoided by the operator. Stop mowing immediately if blades strike a foreign object. Repair all damage and make certain rotor or blade carrier is balanced before resuming mowing. (SGM-05)

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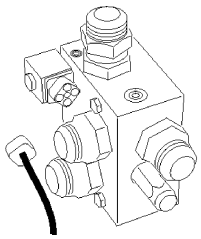
SAFETY

⚠WARNING Mow at the speed that you can safely operate and control the tractor and mower. The correct mowing speed depends on terrain condition and grass type, density, and height of cut. Normal ground speed range is from 2 to 5 mph(3-8 kph). Use slow mowing speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris and foreign objects are to be avoided. (SGM-07)

⚠ DANGER Replace bent or broken blades with new blades. NEVER ATTEMPT TO STRAIGHTEN, WELD, OR WELD HARDFACING ON BLADES SINCE THIS WILL LIKELY CRACK OR OTHERWISE DAMAGE THE BLADE WITH SUBSEQUENT FAILURE AND POSSIBLY CAUSE SERIOUS INJURY FROM THROWN BLADES. (SGM-10)

⚠WARNING Relieve hydraulic pressure prior to doing any maintenance or repair work on the Implement. Place the Mower Head on the ground or securely supported on blocks or stands, disengage the PTO, and turn off the engine. Push and pull the control Levers or Joystick several times to relieve pressure prior to starting any maintenance or repair work. (SBM-6)

⚠ DANGER Always disconnect the wire leads from the mower valve solenoid before performing service on the Tractor or Mower. Use caution when working on the Tractor or Mower. Tractor engine must be stopped before working on Mower or Tractor. The Mower Blades could inadvertently be turned on without warning and cause immediate dismemberment, injury or death. (SBM-12)



⚠ CAUTION Do not back up with this implement. Backing could damage the machine or its components. (S3PT-4)

⚠WARNING Use extreme care when lowering or unfolding the implement's wings. Make sure no bystanders are close by or underneath the wings. Allow ample clearance around the implement when folding or unfolding the wings. Use extreme caution around buildings or overhead power lines. (S3PT-05)

⚠ DANGER There are obvious and hidden potential hazards in the operation of this Implement as in all power-driven or pulled equipment. REMEMBER! This machine is often operated in rough terrain conditions that include tall grass, weeds, gullies, holes, slopes, hidden obstructions and the like. Serious injury or even death may occur unless care is taken to assure the safety of the operator and bystanders in the area. Do not operate this machine with anyone in the immediate area. (S3PT-07)

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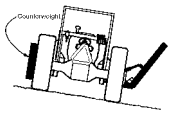
DANGER This Implement may be wider than the Tractor. Be careful when operating or transporting this equipment to prevent the Implement from running into or striking sign posts, guard rails, concrete abutments or other solid objects. Such an impact could cause the Implement and Tractor to pivot violently resulting in loss of steering control, serious injury, or even death. Never allow the Implement to contact obstacles. (S3PT-12)

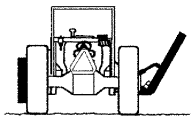
WARNING Never interfere with factory-set hydraulic calibrations. Any change in calibration could cause a failure of the equipment and may result in injury. (SBH-13)

WARNING Maintain adequate tractor stability to prevent lateral instability and possible tip-over which could result in serious bodily injury or even death. Widen the wheel tread and add wheel weights where necessary. Refer to the mounting instructions or call Customer Service if you need assistance with Couterweight Procedure. (SSM-2)

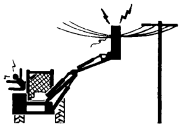


WARNING Do not operate Mower if excessive vibration exists. In the case of extreme vibration, shut down the Mower and the Tractor engine and wait until all motion has stopped. Inspect the Mower to determine the source of the vibration. If any Mower blades are missing or damaged replace them immediately. Operating the Mower with excessive vibration can result in component failure and broken objects could be thrown outward. To reduce the possibility of property damage and personal injury, never allow the Mower to be operated with excessive vibration. (SSM-3)

WARNING Never leave the mower unattended while the head is in the raised position. The mower could fall causing serious injury to anyone who might inadvertently be under the mower. (SSM-4)



DANGER Always keep a careful lookout and use extreme care when working around overhead obstructions. Never allow the Mower head or boom within 10 feet of any power line. When working close to overhead power lines consult your electric company for a safe code of operation. (SBM-7)



WARNING Prolonged operation may cause operator boredom and fatigue affecting safe operation. Take scheduled work breaks to help prevent these potentially impaired operating conditions. Never operate the Implement and Tractor in a fatigued or bored mental state which impairs proper and safe operation. (SG-32)

WARNING Use extreme caution when getting onto the Implement to perform repairs, maintenance and when removing accumulated material. Only stand on solid flat surfaces to ensure good footing. Use a ladder or raised stand to access high spots which cannot be reached from ground level. Slipping and falling can cause serious injury or death. (SG-33)

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SAFETY

⚠WARNING Avoid contact with hot surfaces including hydraulic oil tanks, pumps, motors, valves and hose connections. Relieve hydraulic pressure before performing maintenance or repairs. Use gloves and eye protection when servicing hot components. Contact with a hot surface or fluid can cause serious injury from burns or scalding. (SG-34)

⚠WARNING Perform service, repairs and lubrication according to the maintenance section. Ensure the unit is properly lubricated as specified in the lubrication schedule and all bolts and nuts are properly torqued. Failure to properly service, repair and maintain this Implement in good operating condition could cause component failure and possible serious injury or even death. (SG-35)

⚠ DANGER DO NOT operate this Implement on a Tractor that is not properly maintained. Should a mechanical or Tractor control failure occur while operating, immediately shut down the Tractor and perform repairs before resuming operation. Serious injury and possible death could occur from not maintaining this Implement and Tractor in good operating condition. (SG-36)

⚠ DANGER The rotating parts of this machine have been designed and tested for rugged use. However, the blades could fail upon impact with heavy, solid objects such as metal guard rails and concrete structures. Such impact could cause the broken objects to be thrown outward at very high velocities. To reduce the possibility of property damage, serious injury, or even death, never allow the cutting blades to contact such obstacles. (SGM-4)

⚠WARNING Follow these guidelines to reduce the risk of equipment and grass fires while operating, servicing, and repairing the Mower and Tractor:

-Equip the Tractor with a fire extinguisher in an accesible location.

-Do Not operate the Mower on a Tractor with an underframe exhaust.

-Do Not smoke or have an open flame near the Mower and Tractor.

-Do Not drive into burning debris or freshly burnt areas.

-Ensure slip clutches are properly adjusted to prevent excessive slippage and plate heating.

-Never allow clippings or debris to collect near drivelines, slip clutches, and gearboxes. Periodically shut down the Tractor and Mower and clean clippings and collected debris from the mower deck. (SGM-12)

⚠WARNING DO NOT weld or repair rotating mower components. Welds and other repairs may cause severe vibration and/or component failure resulting in part being thrown from the mower causing serious bodily injury. See your Authorized Dealer for proper repairs. (SGM-13)

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SAFETY

⚠ DANGER The Mower is designed for certain mowing applications and is rated to cut up to a specific size vegetation (see Mower Standard Equipment and Specifications). DO NOT use this mower to cut vegetation above the Mower's rated capacity or to cut any type of non-vegetative material. Only operate this Mower on a properly sized and equipped Tractor. Operating this Mower in an application for which it is not designed and/or operating the Mower with the wrong size Tractor can cause Mower component damage and equipment failure resulting in possible serious injury or death. (SGM-14)

⚠ WARNING Raise the mower head to the transport position and secure with the retaining pin before traveling on public roads and when storing the mower in the upright position. (SSM-05)

⚠ WARNING DO NOT stand in front of the mower head or perform service while the head is in the break back position. The mower head could suddenly swing forward causing serious bodily injury. Relieve all hydraulic pressure and secure the mower in position before performing maintenance. (SSM-06)

⚠ DANGER All Safety Shields, Guards and other safety devices including (but not limited to) - Deflectors, Steel Guards and Gearbox Shields must be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. Missing, broken, or worn items must be replaced at once to reduce the possibility of injury or death from thrown objects, entanglement, or blade contact. (SSM-07)

⚠ WARNING Only replace the spring assembly as a complete unit. DO NOT attempt to remove or repair the spring outside the assembly. Only allow a properly trained mechanic to disassemble the spring assembly. Spring tension when released could cause serious bodily injury. (SSM-08)

⚠ WARNING Wear gloves and exercise care when handling blades. Blades are SHARP and can cause lacerations to hands and other parts of the body if not safely handled. (SSM-09)

⚠ DANGER Do not operate the implement while wearing loose fitting clothing. Entanglement of the clothing with the rotating elements can result in serious injury or even death. Stay clear of all rotating elements at all times. (SSP-03)

⚠ DANGER **DO NOT** allow any person under a folded wing unless wing is securely locked up or supported. **DO NOT** approach the Implement unless the Tractor is turned off and all motion has ceased. Never work under the frame work, or any lifted component unless the implement is securely supported or blocked up. A sudden or inadvertent fall by any of these components could cause serious injury or even death. (STI-03)

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PARTS INFORMATION

Alamo Industrial mowers use balanced and matched system components for blade carriers, blades, cuttershafts, knives, knife hangers, rollers, drivetrain components, and bearings. These parts are made and tested to Alamo Industrial specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of “will fit” parts may reduce mower performance, void mower warranties, and present a safety hazard. Use genuine Alamo Industrial mower parts for economy and safety. (SPAM-1)

SEE YOUR ALAMO DEALER

SAFETY

In addition to the design and configuration of this Implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the Tractor and Equipment Manuals. Pay close attention to the Safety Signs affixed to the Tractor and Equipment. (SG-18)

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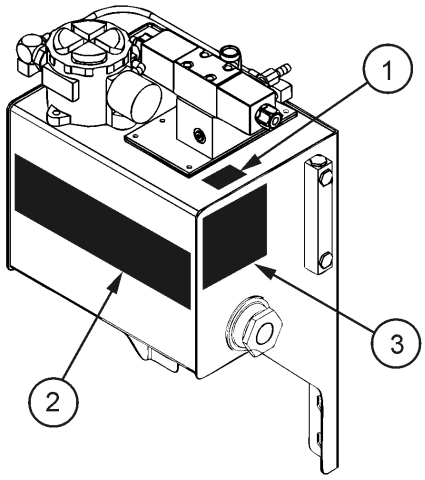
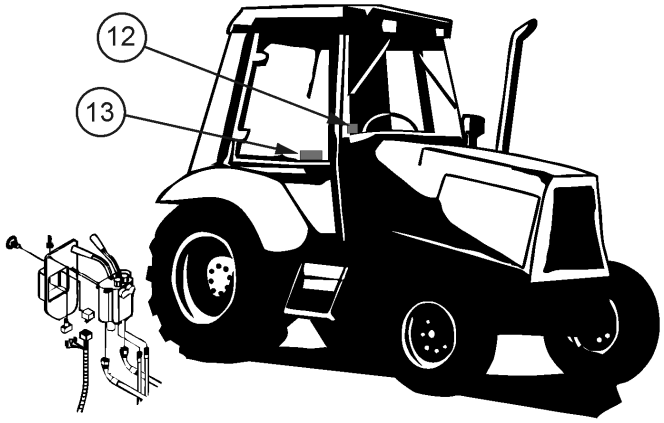
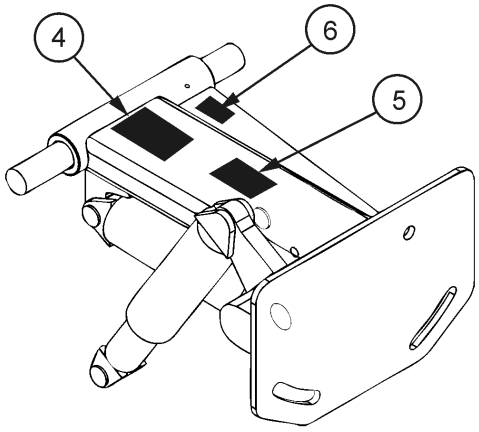
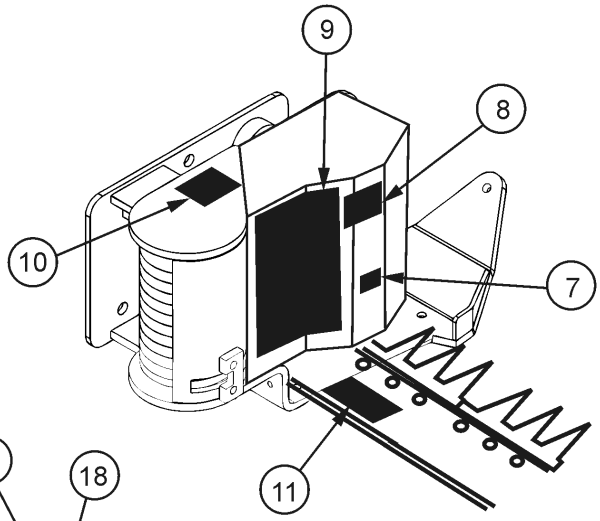
Decal Location

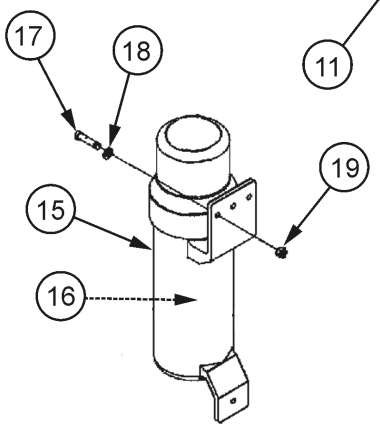
NOTE: *Alamo Industrial supplies safety decals on this product to promote safe operation. Damage to the decals may occur while in shipping, use, or reconditioning. Alamo Industrial cares about the safety of its customers, operators, and bystanders, and will replace the safety decals on this product in the field, free of charge (Some shipping and handling charges may apply). Contact your Alamo Industrial dealer to order replacement decals.*











DL-S-0004

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ITEM	PART NO.	QTY.	TYPE	DESCRIPTION
1.	D630	1	INSTRUCT	Service with Universal Hyd Oil
2.	02974997	1	NAME	Switch Blade
3.	D617	1	WARNING	Hydraulic Oil Leak
4.	D628	1	DANGER	Crushing Hazard & Pinch Points
5.	D733	1	WARNING	Not A Step
6.	NFS	1	SER PLT	Serial Number Plate
7.	D726	1	INSTRUCT	Grease Fitting Inside
8.	D734	1	INSTRUCT	Lubrication Chart
9.	D728	1	DANGER	Run Over Hazard
10.	D731	1	DANGER	Amputation Hazard
11.	D725	1	IMPORTANT	Blade Clearance
12.	D732	1	IMPORTANT	Actuate Control Handle to Reset
13.	D635	1	WARNING	Operate Machine at 540 RPM
14.	03200347	1	REFLECTOR	SMV Symbol
15.	00776031	1	_____	Canister, Parts Manual
16.	02974374C	1	_____	Switch Blade Operator’s Manual
17.	10058000	3	_____	Bolt
18.	00017000	3	_____	Flatwasher
19.	02959924	3	_____	Locknut

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Decal Description

⚠ WARNING

TO AVOID SERIOUS INJURY OR DEATH FROM HIGH PRESSURE HYDRAULIC OIL LEAKS PENETRATING SKIN:

- DO NOT OPERATE equipment with oil or fuel leaks.
- KEEP all hydraulic hoses, lines and connections in good condition and tight before applying system pressure.
- Relieve hydraulic pressure before disconnecting lines or working on the system.
- REMOVE and replace hose if you suspect it leaks. Have dealer test it for leaks.

HIGH PRESSURE FLUID LEAKS CAN BE INVISIBLE. WHEN CHECKING FOR HYDRAULIC LEAKS AND WORKING AROUND HYDRAULIC SYSTEMS:

- DO NOT use hands to check for leaks.
- ALWAYS WEAR safety glasses and impenetrable gloves.
- USE paper or cardboard to search for leaks.
- KEEP hands and body AWAY from pin holes and nozzles ejecting hydraulic fluid.
- Hydraulic fluid may cause gangrene if not surgically removed immediately by a doctor familiar with this form of injury.

D617

⚠ ADVERTENCIA

PARA EVITAR LESION SERIA O MUERTE POR LA PENETRACION A LA PIEL POR ALTA PRESION DE ACEITE HYDRÁULICO:

- NO OPERE el equipo con fugus de aceite o combustible.
- MANTENGA todas las mangueras hydráulicas, líneas y conexiones en buenas condiciones y apretadas antes de aplicar presión al sistema.
- Releve la presión hidráulica antes de desconectar las líneas o trabajar en le sistema.
- QUITE y reemplace la manguera si sospecha que hay fuga.

FUGAS DE ALTA PRESIÓN PUEDEN SER INVISIBLE. AL VERIFICAR POR FUGAS HIDRAULICAS Y TRABAJANDO ALREDEDOR DE SISTEMAS HIDRAULICOS:

- NO use las manos para verificar si hay agujeros.
- SIEMPRE USE lentes de seguridad y guantes impenetrables.
- USE papel o un cartón para buscar agujeros.
- NO USE las manos o partes del cuerpo para buscar agujeros.
- MANTEGA manos y cuerpo LEJOS de agujeros de alfiler y boquillas que expulsan el liquido hidráulicos.

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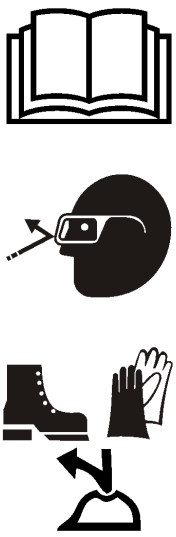
DANGER

TO AVOID SERIOUS INJURY OR DEATH:

- READ AND UNDERSTAND the provided Operator's Manuals, safety signs and information decals for tractor and implement before operating equipment.
- CONTACT DEALER immediately if you do not have manuals.
- CONTACT DEALER to explain any instructions not fully understood.
- KNOW HOW to stop tractor and equipment quickly for an emergency.
- ALWAYS WEAR safety glasses.
- WEAR hard hat, safety shoes and gloves for protection when operating equipment.



PELIGRO

PARA EVITAR LESION SERIA O MUERTE:

- LEA Y ENTIENDA el Manual de Operador proporcionado, signos de seguridad y calcomanias informativas para el tractor y implemento antes de operar el equipo.
- CONTACTE AL DISTRIBUIDOR imediatamente si no tiene los manuales.
- CONTACTE AL DISTRIBUIDOR para que le explique cualquier instrucciónes que no entiende completamente.
- ENTIENDA COMO parar el tractor y equipo rapidamente en caso de emergencia.
- SIEMPRE USE lentes de seguridad.
- USE un casco, zaptos de seguridad y guantes para su protection cuando esta operando el equipo.

D728_1

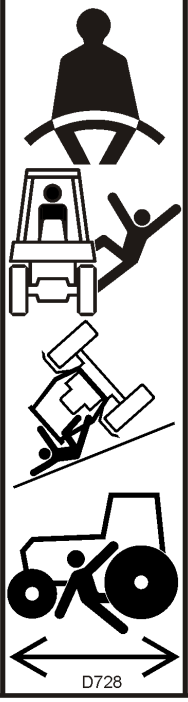
DANGER

Run Over Hazard Injury or Death

TO AVOID SERIOUS INJURY OR DEATH:

- ALWAYS USE **R**oll **O**ver **P**rotective **S**tructure (”ROPS”) including ROLL BAR and SEAT BELT equipped tractors for mowing operations.
- ONLY START Tractor while seated in the operator's seat.
- DO NOT MOUNT or DISMOUNT tractor in motion.
- NEVER ALLOW riders on tractor or implement.
- NEVER ALLOW children to operate or ride on tractor or implement.
- KEEP BYSTANDERS CLEAR of area before moving tractor or implement.
- STOP ENGINE AND PTO, engage parking brake, lower implement, allow all moving parts to stop and remove key before dismounting from tractor.

D728_2



D728

PELIGRO

Riesgo de Atropello Lesión o Muerte

PARA EVITAR LESION SERIA O MUERTE:

- SIEMPRE USE tractors equipados con una Estructura Protectora Contra Vuelcos ("ROPS") incluyendo BARRA ANTIVUELCOS y CINTURON DE SEGURIDAD al segar.
- SOLO ENCIENDA el tractor mientras que esta sentado en el asiento del operador.
- NO MONTE o DESMONTE el tractor en movimiento.
- NUNCA PERMITA pasajeros en el tractor o implemento.
- NUNCA PERMITA que niños operen o se monten en el tractor o implemento.
- MANTENGA LAS PERSONAS PRESENTES LEJOS de la area antes de mover el tractor o implemento.
- PARE EL MOTOR Y PTO, aplique el freno de mano, baje el implemento, y deje que todas las partes movil paren completamente, y quite la llave antes de desmontar el tractor.

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DANGER
AMPUTATION HAZARD
TO AVOID SERIOUS INJURY FROM BLADE CONTACT:
• Keep away until all motion has stopped.
• Keep fingers clear of cutterbar when folding cutterbar into transport position.
• KEEP all persons AWAY from sickle blades.
PELIGRO
RIESGO DE AMPUTACIÓN
PARA EVITAR LESION SERIA POR EL CONTACTO A LA CUCHILLA:
• Mantengase alejado hasta que todo movimiento a parado.
• Mantenga los dedos alejados de la barra de corte al devantar la barra de corte a la posición de transporte.
• MANTENGA todas las personas ALEJADAS de las cuchillas del la barra de hoz.
D731

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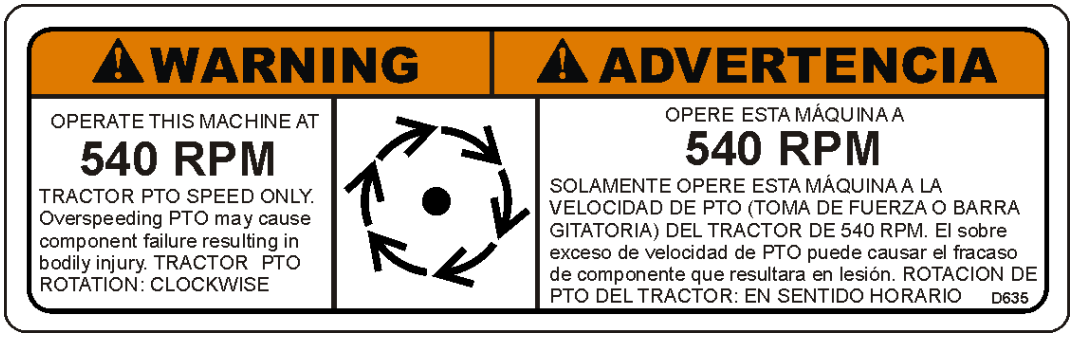
DANGER
CRUSHING HAZARD AND PINCH POINTS
TO AVOID SERIOUS INJURY OR DEATH:
• KEEP AWAY from moving machinery parts that can pinch, crush or fall.
PELIGRO
RIESGOS DE APLASTAMIENTO Y PUNTOS DE PELLIZCO
PARA EVITAR LESION SERIA O MUERTE:
• MANTENGASE ALEJADO de piezas moviles de la maquina que pueden peliscar, aplastar o caerse.
D628


WARNING
OPERATE THIS MACHINE AT
540 RPM
TRACTOR PTO SPEED ONLY. Overspeeding PTO may cause component failure resulting in bodily injury. TRACTOR PTO ROTATION: CLOCKWISE
ADVERTENCIA
OPERE ESTA MÁQUINA A
540 RPM
SOLAMENTE OPERE ESTA MÁQUINA A LA VELOCIDAD DE PTO (TOMA DE FUERZA O BARRA GITATORIA) DEL TRACTOR DE 540 RPM. El sobre exceso de velocidad de PTO puede causar el fracaso de componente que resultara en lesión. ROTACION DE PTO DEL TRACTOR: EN SENTIDO HORARIO
D635

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Federal Laws and Regulations

This section is intended to explain in broad terms the concept and effect of federal laws and regulations concerning employer and employee equipment operators. This section is not intended as a legal interpretation of the law and should not be considered as such.

Employer-Employee Operator Regulations

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

This Act Seeks:

"...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources..."

DUTIES

Sec. 5 (a) Each employer-

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA Training Requirements

Title 29, Code of Federal Regulations Part 1928.57(a)(6). **www.osha.gov**

Operator instructions. At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee who operates an agricultural tractor and implements in the safe operating practices and servicing of equipment with which they are or will be involved, and of any other practices dictated by the work environment.

Keep all guards in place when the machine is in operation;

Permit no riders on equipment

Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.

Make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.

Employer Responsibilities:

To ensure employee safety during Tractor and Implement operation, it is the employer's responsibility to:

1. Train the employee in the proper and safe operation of the Tractor and Implement.
2. Require that the employee read and fully understand the Tractor and Implement Operator's manual.
3. Permit only qualified and properly trained employees to operate the Tractor and Implement.
4. Maintain the Tractor and Implement in a safe operational condition and maintain all shields and guards on the equipment.
5. Ensure the Tractor is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.
6. Forbid the employee operator to carry additional riders on the Tractor or Implement.
7. Provide the required tools to maintain the Tractor and Implement in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.
8. Require that the employee operator stop operation if bystanders or passersby come within 300 feet.

Child Labor Under 16 Years of Age

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

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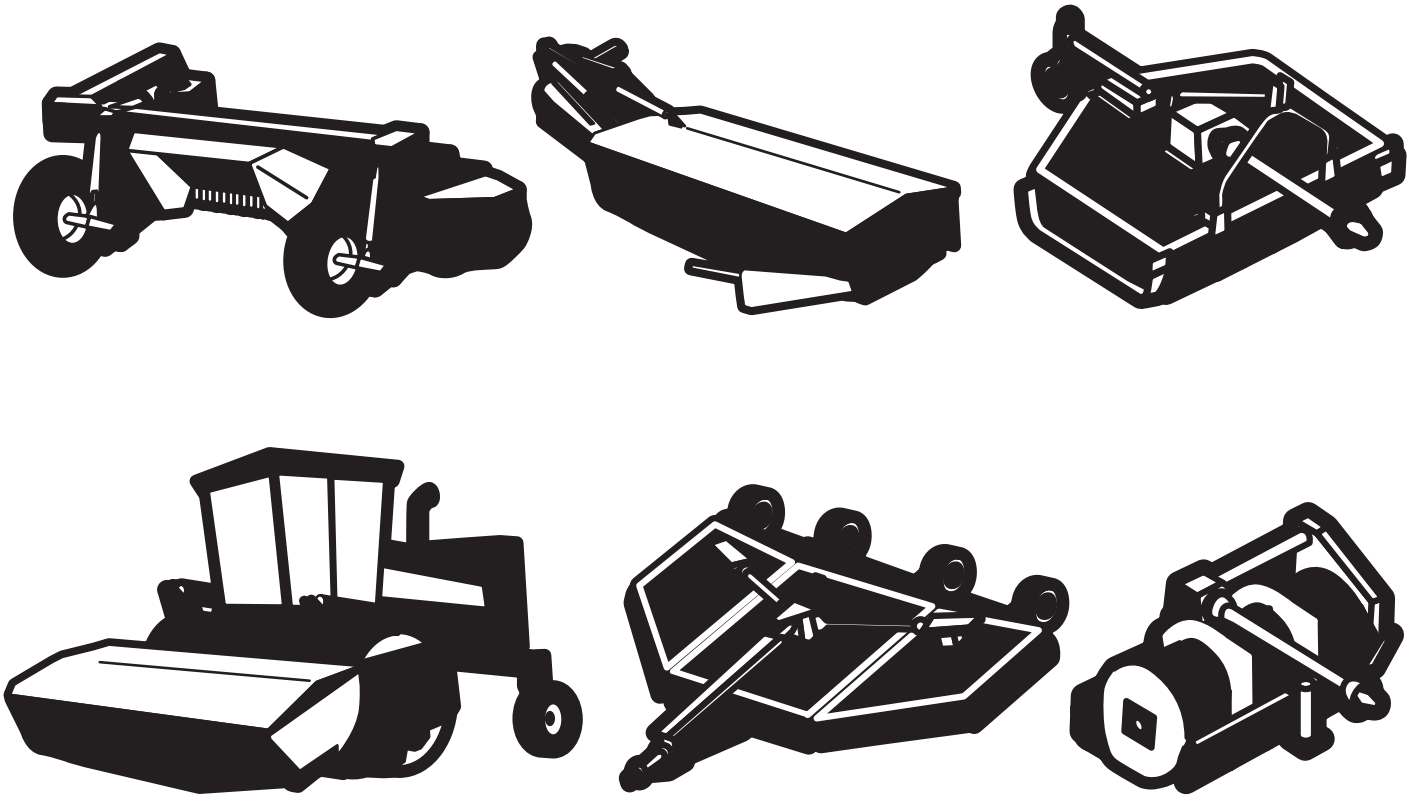
INDUSTRIAL/
AGRICULTURAL MOWER

www.aem.org

SAFETY MANUAL

FOR OPERATING AND MAINTENANCE PERSONNEL



FORM IAMSE-1009
Printed in U.S.A.

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Acknowledgment

We wish to acknowledge the contributions of the members of AEM's Industrial/Agricultural Mower Manufacturers Council to the preparation of this Safety Manual.

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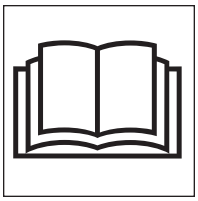
Revised 01/03, 09/10

Foreword

This safety manual is intended to point out some of the basic safety situations that may be encountered during the normal operation and maintenance of your machine and to instruct you in safety practices for dealing with these conditions. This manual is **NOT** a substitute for the mower manufacturer's operator's manual(s).

Additional precautions may be necessary, or some instructions may not apply, depending on equipment, attachments and conditions at the worksite or in the service area. The manufacturer has no direct control over equipment application, operation, inspection or maintenance. Therefore, it is **YOUR** responsibility to use good safety practices in these areas.

The information provided in this manual supplements the specific information about your machine that is contained in the manufacturer's operator's manual(s). Other information that may affect the safe operation of your machine may be contained on safety signs or in insurance requirements, employer's safety and training programs, safety codes, local, state/provincial and federal laws, rules and regulations.



Read and Understand Manuals Before Operating

IMPORTANT! Before you operate the mower, make sure you have the manufacturer's operator's manual(s) for this machine and all attachments. If the manufacturer's manuals are missing, obtain replacement manuals from your employer, equipment dealer or directly from the manufacturer. Keep this safety manual and the manufacturer's manuals with the machine at all times. Read and understand all manuals.

The AEM Mower Safety Practices video is available to train and reinforce good safety practices. Operators are encouraged to periodically view the safety video.

Safety Alerts

Symbol

This Safety Alert Symbol means: **"ATTENTION! STAY ALERT! YOUR SAFETY IS INVOLVED!"**

The Safety Alert Symbol identifies important safety messages on equipment, safety signs, in manuals or elsewhere. When you see this symbol, be alert to the possibility of death or personal injury. Follow instructions in the safety message.

Reasons Safety is Important:

— Accidents disable and kill.

— Accidents cost.

— Accidents can be avoided.

Signal Words

Signal words are distinctive words that will typically be found on safety signs on the mower and other worksite equipment. These words may also be found in this manual and the manufacturer's manuals. These words are intended to alert the operator to a hazard and the degree of severity of the hazard.

⚠ DANGER **DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING **WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION **CAUTION** indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

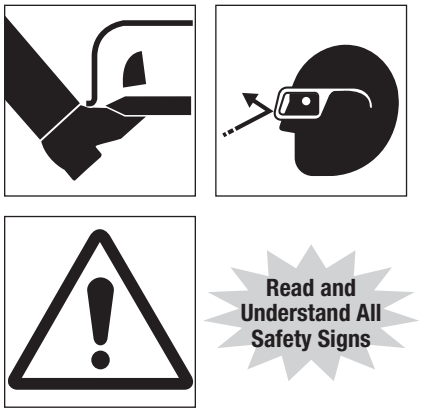
NOTICE **NOTICE** indicates a property damage message.

A Word To The User/Operator

It is **YOUR** responsibility to read and understand the safety manual and the manufacturer's manuals before operating this machine. This safety manual takes you step by step through your working day.

Hazard Recognition and Accident Prevention depend upon you being alert, careful and properly trained in the operation, transport, maintenance and storage of this equipment.

Graphics have been provided to help you understand the text.



Remember that **YOU** are the key to safety. Good safety practices not only protect you but also protect the people around you. Study and understand this manual and the manufacturer's manuals for your specific machine. Make them a working part of your safety program. Keep in mind that this safety manual is written for industrial/agricultural mowers.

Contact the manufacturer of your equipment to answer any questions about safe operation that remain after studying the manufacturer's operator's manual(s) and this safety manual.

Practice all other usual and customary safe working precautions and above all:

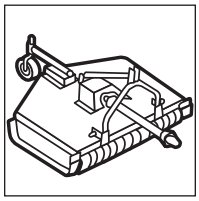
REMEMBER — SAFETY IS UP TO YOU!

YOU CAN PREVENT SERIOUS INJURY OR DEATH CAUSED BY UNSAFE WORK PRACTICES!

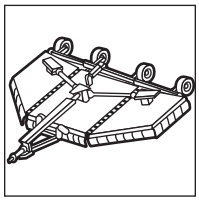
The Industrial/Agricultural Mower

Industrial/Agricultural Mower Types

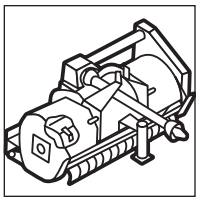
Mowers are used for pasture clipping, crop residue shredding, heavy brush cutting, waterways, right-of-ways, roadside or highway mowing. Also, these mowers are used for cutting grass and other growth in public areas such as parks and cemeteries.



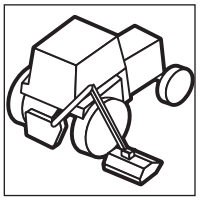
Rotary



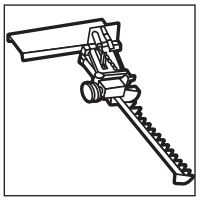
Folding Wing Rotary



Flail



Boom

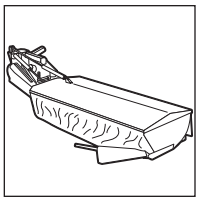


Sickle Bar

The Industrial/Agricultural Mower

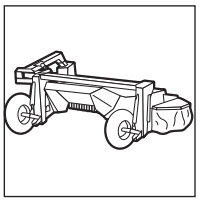
Agricultural Disc Mower Types

Disc mowers are designed and equipped to cut hay crops at higher field speed.



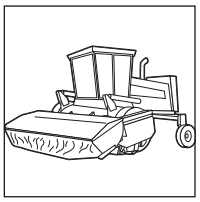
Disc Mower

Disc mower/conditioners mow and condition crops.



Disc Mower Conditioner

Self-propelled windrowers mow and form conditioned hay into windrows.



Self-propelled Windrower

Follow A Safety Program

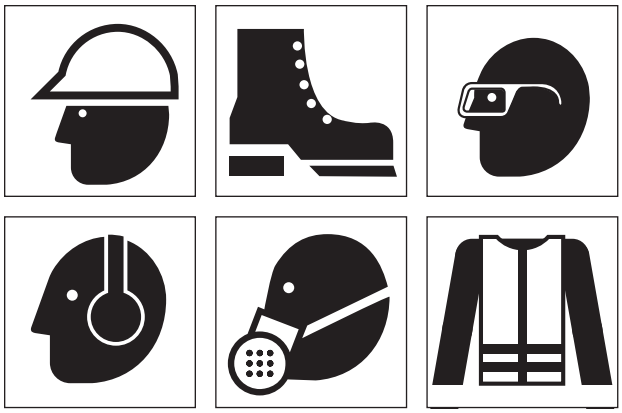
Protect Yourself

Wear personal protective clothing and Personal Protective Equipment (PPE) issued to you or called for by job conditions. You must **ALWAYS** wear safety glasses with side shields.

You may also need:
— Hard hat
— Safety shoes
— Safety goggles or face shield
— Heavy gloves
— Hearing protection
— Reflective clothing
— Wet weather gear
— Respirator or filter mask

Wear whatever is needed—don't take chances.

WARNING! Prevent death or serious injury from entanglement. **Do not wear loose clothing or accessories. Tie up long hair. Stay away from all rotating components when the engine is running.** Contact, wrapping or entanglement with rotating or moving parts could result in death or serious injury.



Follow A Safety Program

— Read, understand and follow the manufacturer's written instructions found in the operator's manual(s) and safety signs on mower and tractor.
— Have operational training with mower and tractor.
— Take advantage of training programs offered in your area.
— Ask your equipment dealer or supervisor to explain things you do not understand.
— Explain the written instructions in the operator's manual(s) and safety signs to those users or operators who cannot read.
— Inspect the mower and tractor daily before operating. Ensure all guards are in place and the equipment is operating properly.
— Never smoke while operating. Never fill the fuel tank with the engine running or near an open flame.
— Make sure you have adequate visibility and sufficient lighting.
— Know the pinch points and rotating parts. Awareness on your part can prevent accidents.
— Never attempt to operate the controls except from the operator's seat. Improperly controlled functions could produce unexpected machine movement and result in serious injury or death.
— Shut down the mower and tractor before dismounting. (See page 18, **Proper Equipment Shut Down Practices.**)

Follow A Safety Program

Avoid Injury From Raised Equipment

Avoid possible crushing injury from falling mower or other raised equipment.

Avoid Crushing – Block Up or Securely Support Mower

Before working near or under raised mower or equipment parts:

— Securely support or block up raised mower or equipment parts according to the operator's manual.
— Securely support, block up or lock up wings with approved locking devices or lower mower or equipment parts to the ground.
— Use transport locks when transporting mower on public roads.

Avoid Injury From High Pressure Fluid

Avoid fluid injection injury due to high pressure fluid leaks.

High Pressure Fluid Can Inject into the Body

If any fluid is injected into the skin, it must be removed within a few hours by a doctor familiar with this type of injury.

Fluid leaks under pressure may not be visible. When checking for leaks or working around pressurized systems:

— Read manufacturer's operator's manual(s) for recommended safety practices.
— Wear a face shield or safety goggles for eye protection.
— Use a piece of cardboard or wood to check for leaks; **DO NOT use your hands.**
— Relieve system pressure before disconnecting lines.
— Check for and repair damaged or leaking lines, pipes and hoses.
— Check for and tighten loose connections.
— Purge air from system before operating.

Follow A Safety Program

Avoid Injury From Fire And Explosion

Set the parking brake, shut the mower and tractor engine down and remove the key while filling the fuel tank. Use extra caution when fueling a hot engine. Never smoke while fueling. Avoid sparks by grounding the fuel nozzle against the filler neck.

The fumes in an empty fuel tank are explosive. Never weld or cut on fuel lines, tanks or containers.

Remove all trash or mowing debris from the machine daily or as needed. Keep debris away from engine, exhaust, slip clutches and other heat sources. Use spark arrestors, as appropriate, on the engine exhaust system. Make sure oily rags or other flammable material are not stored on the machine.

Check for fuel, oil or hydraulic fluid leaks. Repair the leaks and clean the machine before you operate it.

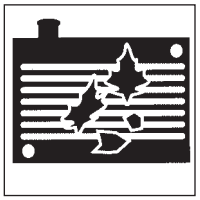
Ether/cold start fluid is flammable. Do not smoke when using ether/cold start fluid. Always follow the instructions on the can and in the manufacturer's operator's manual(s) for your mower. Do not use ether/cold start fluid if the engine is equipped with a glow plug or other type of preheater.

Always use a nonflammable solvent when you clean parts. Do not use gasoline, diesel fuel or other flammable fluids.

Store all flammable fluids and materials away from your machine and work area.

Know where fire extinguishers are kept—how they operate—and what type of fire they are for. Check readiness of fire extinguishers according to manufacturer's instructions. Make sure each tractor is equipped with a fire extinguisher.

No Smoking and No Open Flames



Remove Debris Daily or As Needed

Follow A Safety Program

Be Alert!

Know where to get assistance. Know how to use a first aid kit and fire extinguisher/fire suppression system.

Be Aware!

Take advantage of training programs offered.

Be Careful!

Human error is caused by many factors: carelessness, fatigue, overload, preoccupation, unfamiliarity of operator with the machine, drugs, and alcohol to name a few. Damage to the tractor or mower can be fixed in a short period of time, but injury, or death, has a lasting effect.

For your safety and the safety of others, encourage your fellow workers to act safely.

For Safe Operation

You must be a qualified and authorized operator for proper operation of your machine. You must clearly understand the written instructions supplied by the manufacturer, be trained—including actual operation of the mower—and know the safety rules and regulations for the worksite. It is a good safety practice to point out and explain safety signs and practices and ensure others understand the importance of following these instructions.

WARNING! Drugs and alcohol affect an operator's alertness and coordination and the operator's ability to safely operate the equipment. **Never use drugs or alcohol while operating the mowing equipment. Never knowingly allow anyone to operate this machine when their alertness or coordination is impaired.** An operator taking prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to safely operate this equipment.

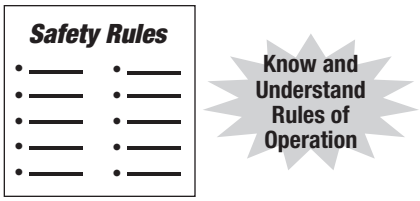
Follow A Safety Program

Know The Rules

Most employers have rules governing operation and maintenance of equipment. Before you start work at a new location, check with your supervisor or the safety coordinator. Ask about the rules you will be expected to obey.

The Occupational Safety and Health Administration (OSHA) enforces federal laws within the United States that apply to safe operation, application and maintenance of equipment on a worksite. It is the employer's responsibility to comply with these laws. An OSHA representative may periodically inspect a worksite to see that these laws are being followed.

There may also be local or state/provincial laws or international regulations that apply to this equipment and its use, along with specific worksite or employer rules. It is important that you know and comply with all applicable laws and rules, including those requiring operator training and certification.



These are some of the rules you must work by:

— A ROPS and seat belt-equipped tractor is a federal government (OSHA) requirement for operator protection during mowing operations. An enclosed cab provides additional operator protection from thrown objects. Check your mower operator's manual to see if a tractor cab is also required.
— Wear and check that others are wearing proper clothing and personal protective equipment.
— Inspect your machine and attachments before each use as specified by the manufacturer and your employer.
— Know the limitations and operating characteristics of your mowing equipment. Do not misuse it.
— Have all provided shields and guards properly installed before operating the machine.
— Never modify or remove any part of the machine (except for service—then make sure it is replaced).

Follow A Safety Program

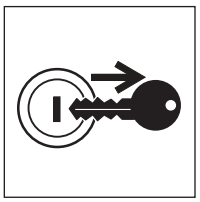
Some Rules You Must Work By (continued)

— Only qualified and authorized individuals may operate this equipment.
— **Never allow children** to **play** on, **ride** on or **operate** the equipment. Children **are not** qualified to operate this equipment.
— **Do not** allow **any** riders.
— Use three-point contact (handholds and steps) and face the equipment when mounting or dismounting.
— Keep bystanders 300 ft (92 m) from the mowing operation.
— Know the worksite before you use the mower. Be aware of possible terrain hazards that you may encounter. Remove or mark obstacles and debris that could damage or be thrown by the mower.
— Only use attachments and parts that are approved by the mower manufacturer.
— Make sure all attachments are lowered, set the parking brake, shut off the engine and cycle the control levers. Remove the key before leaving the tractor. (See page 18, **Proper Equipment Shut Down Practices.**)
— When transporting the mower on a trailer, follow the manufacturer's detailed instructions for loading, tying down and unloading the mower.

Keep Children Away from Equipment

Keep Bystanders Away

No Riders

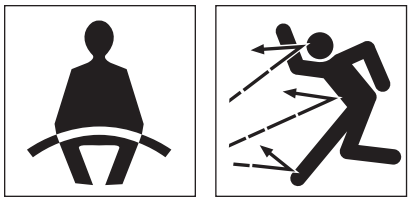


Shut Down Unattended Equipment

Follow A Safety Program

Know The Equipment

Read and understand the DANGER, WARNING, CAUTION and NOTICE safety signs and other informational signs on the tractor and mower and in the manufacturer's operator's manual. Ask your supervisor or mower dealer to explain any information you do not understand. Failure to obey safety instructions could result in death or serious injury.



Read and Understand All Safety Signs

Make sure all the manufacturer's protective structures, guards, shields, screens and panels are in good repair, in place and securely fastened. Damaged, missing or weakened safety components can create a hazardous situation for you as the operator. **Never** remove or modify any safety components including thrown object shielding on a mower.

Know the following about your tractor and mower:

— Function, purpose and use of all controls.
— Correct operation speeds.
— Slope and uneven terrain capabilities and proper operation.
— Braking and steering characteristics.
— Turning radius and clearances.
— How to quickly stop equipment in an emergency.

Read and Understand Manuals Before Operating

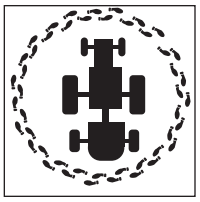
Prepare For Safe Operation

Check The Mower And Tractor Equipment

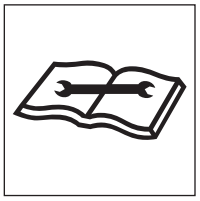
Before beginning your work day inspect the machine and have all systems in good operational condition.

WARNING! Prevent possible crushing injury from falling equipment. Hydraulic system or part failure could cause unsupported equipment to fall. **Do not go under raised equipment unless it is properly supported according to the operator's manual.**

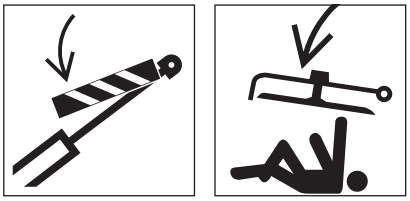
— Perform daily and periodic service procedures as instructed by the equipment manufacturer.
— Check for loose, broken, missing or damaged tractor and mower parts. Repair or replace these parts.
— Check for proper tractor and mower attachments.
— Check for proper tractor and mower PTO rpm rating match.
— Check mower blade(s) condition. Replace severely worn, bent, gouged or nicked blades including the blade bolts and fasteners. Never straighten or weld on blades.
— Ensure thrown object shielding is properly installed and in good condition. Repair or replace if damaged or missing.



Walk-Around Inspection



Maintain Machine



Read Manual – Block Up or Securely Support Mower

Prepare For Safe Operation

— Check that all guards and shields are in place and that all equipment is in good operating condition. This includes PTO driveline, gearbox and implement guards and shields that are used for operator protection.
— Check for properly latched driveline yoke-end locking devices.
— Check for damaged or leaky tractor and mower hydraulic systems. Repair or adjust as needed.

WARNING! Hydraulic fluid under pressure can penetrate the skin or eyes and cause serious injury, blindness or death. Fluid leaks under pressure may not be visible. **Use a piece of cardboard or wood to find leaks, not your hand. Wear eye protection.** If fluid is injected into the skin, it must be removed within a few hours by medical personnel familiar with this type of injury.

— Keep the operator platform surface clean and free of grease, oil, dirt, snow or ice. Steps and handholds must be clean and functional.
— Ensure work lights are kept clean (if equipped). Check that all lights work properly.
— Ensure the slow moving vehicle (SMV) sign, reflectors and warning lights are in good condition and can be clearly seen.
— Ensure all tools or loose objects are removed or securely fastened while operating the machine.
— Check all safety signs for clarity. Replace damaged signs.

Check for Missing/ Damaged Guards and Shields

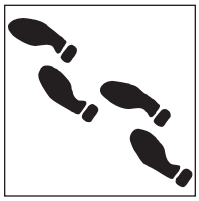
Check for Leaks and Inspect Hoses

Put Away Tools

Prepare For Safe Operation

Know The Work Area

Before you operate the mower thoroughly inspect the work area. Walk around the area and inspect the surfaces you will travel on when using the mower.



Walk Around the Worksite

Locate and avoid:

- Holes
- Drop-offs
- Obstacles (stumps)
- Excavations
- Standing water
- Deep mud
- Wet spots
- Soft soil
- Rough spots
- Power lines and apparatus
- Other utilities
- Any conditions which could cause collision, loss of control or tipover
- Steep slopes

Look for debris and obstacles by walking the area before you mow. Objects like wire, cable, rocks, tires, and metal objects that could damage or be thrown by the mower must be removed or marked clearly and avoided.

Correct unsafe conditions. Do not operate in problem areas where debris and obstacles cannot be removed or marked.

Analyze mowing area to determine:

- The most efficient mowing procedure.
- The height of the material to be mowed.
- Operating terrain conditions.
- How to best use forward mowing pattern.
- The potential for bystanders or passers-by to be exposed to thrown objects.

Remove or Mark Debris and Obstacles

Look Out For Others

Before starting equipment:

- Walk around the equipment.
- Check for anyone under, on or near the equipment.
- Clear everyone from these areas.
- Sound a warning.

Prepare For Safe Operation

Mount And Dismount Tractor Properly

Always use three-point contact when mounting or dismounting the tractor or mower. Face the machine when you enter or leave the machine. Three-point contact means that three out of four arms and legs are in contact with the machine at all times during mount and dismount.

Before mounting:

- Clean shoes and wipe hands. Clean steps and handholds of snow, ice, mud or oil.

During mounting and dismounting:

- Use handholds and step plates.
- Never grab steering wheels or controls for handholds.
- Never mount or dismount from a moving tractor.
- Never mount or dismount while carrying tools or objects that prevent three-point contact. Put parts or tools down. Maintaining proper contact, climb and then pick up the object.

Use Three-Point Contact

Clean Up Slippery Areas

Prepare For Safe Operation

Tractor And Mower Controls Safety Test

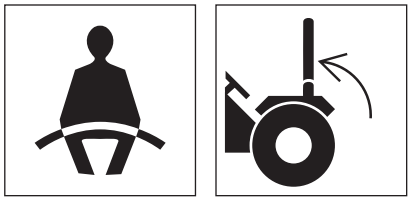
Start the tractor following the specific procedures in the manufacturer's operator's manual. These procedures normally include:

— Fasten and adjust seat belt on your ROPS-equipped tractor.
— Check parking brake for engagement.
— Check PTO disengagement.
— Check all controls for Park position.
— Warn others in area before starting tractor.
— Start tractor following tractor manufacturer's recommended starting procedures.

WARNING! Avoid serious injury or death from unexpected machine movement. **Start the engine only from the operator's position. Never attempt to start the engine by shorting across starter terminals or reaching the key from the ground or outside the cab.**

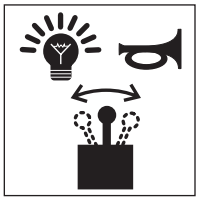
After starting:

— Check all instruments, gauges and indicator lights for normal operation.
— Check all tractor controls, steering and brakes for proper function.
— Raise and lower mower to check for driveline bottoming out or engagement problems.
— Check the equipment for excessive vibration and unusual noises.



Use ROPS and Seat Belt

Start Only from Operator's Seat



Check Instruments and Controls

Prepare For Safe Operation

— Use proper equipment shut down practices before inspecting equipment. Wait until all equipment motion has stopped before dismounting the tractor or mower.
— Do not operate mower unless tractor and mower are running properly. Place a "Do Not Operate" tag on the machine, remove the key and do not operate the mower until the problem is corrected.

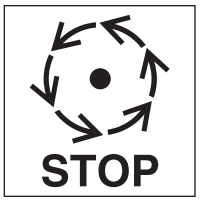
Power Takeoff System

Be sure to operate the tractor at the mower's rated PTO rpm speed.

When operating tractors with transmission-driven PTO systems, a rotary mower will have a significant flywheel effect. The mower may continue to propel a tractor with a transmission-driven PTO system.

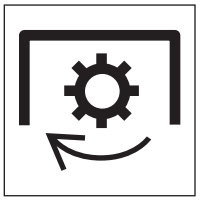
The tractor should be equipped and operated as follows:

— Install a driveline equipped with an over-running clutch.
— Give yourself sufficient maneuvering room and time by anticipating turns, stops and speed reductions.



Do Not Dismount Until Equipment Motion Has Stopped

Use a "Do Not Operate" Tag



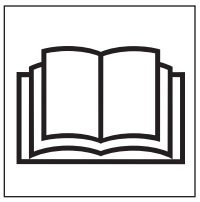
Use Proper PTO Speed

Prepare For Safe Operation

Hitching Mower To Tractor

Three-point hitch-mounted mowers:

— Refer to mower and tractor manufacturers' manuals.
— Place tractor's hydraulic power lift (rockshaft) selector lever in down position to avoid unexpected movement.
— Explain the hitching procedures to those operators who cannot read.
— Front-end weights may be needed to maintain steering control and front-end stability. Refer to the manufacturers' operator's manual(s).
— When backing the tractor up to the mower, NEVER allow anyone between the tractor and the mower.
— Attach the mower to the tractor three-point links and securely pin in position.
— Securely attach the driveline to the tractor PTO. Lower the master shield into place if it is movable. Push and pull on the driveline to ensure it is locked onto the PTO shaft.



Read and Understand Manuals Before Operating

Maintain Proper Weight Distribution

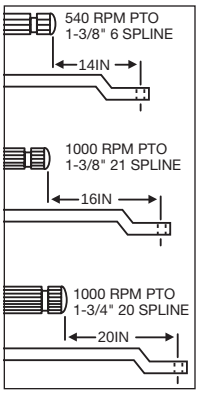
No One Allowed Between Tractor and Mower

Avoid Entanglement, Use Guards and Shields

Prepare For Safe Operation

Pull-type hitch-mounted mowers:

— Refer to mower and tractor manufacturers' manuals.
— Remove three-point hitch quick coupler if equipped.
— Attach only to drawbar hitch.
— Adjust tractor drawbar length for 540 or 1000 rpm PTO operation.
— When backing the tractor up to the mower, NEVER allow anyone between the tractor and the mower.
— Properly attach the mower safety tow chain to the tractor.
— Securely attach the driveline to the tractor PTO. Push and pull on the driveline to ensure it is locked onto the PTO. Lower the master shield into place.
— Hook up the mower hydraulic hoses to the tractor.
— Make sure the wings, or raised mower decks, are supported by the cylinders before removing the transport locks. Never use force to release the transport or wing locks. The wings or deck could fall and crush you.



Tractor Drawbar Adjustment

Confirm Wings Are Supported Before Releasing Locks

Avoid Entanglement, Use Guards and Shields

Start Safely

Make The Right Start

Mow only in daylight or good artificial light conditions.

Avoid serious injury or death from mower-thrown objects or blade contact:
— Keep chain shields, flexible or solid deflector shields or discharge chutes in place and in good repair.
— Keep bystanders at least 300 ft (92 m) from mowing operation.
— Never direct mower discharge toward anyone.
— Keep hands, feet and other body parts away from rotating parts, blades and discharge openings.
— Do not operate mower in transport position.

Do not approach a mower until all motion has stopped.

Mower PTO drive engagement:
— Raise mower to maximum cutting height.
— Engage PTO at low engine rpm.
— Increase engine rpm to mower's rated rpm PTO speed.
— Lower mower to desired cutting height.
— Stop and shut down immediately if the mower strikes an obstruction.
— Inspect and repair any mower damage before resuming mowing.
— Do not operate mower with severe vibrations or with unusual noise.

Rotating Blades – Keep Away

Do Not Operate a Damaged Mower

Mower-Thrown Objects

Depending on the designed purpose, mowers are designed to cut grass, weeds, brush and crops. The mower blades have been designed and tested for rugged use. The mower blades, however, are not intended to contact solid objects like rocks, concrete or metal. Such impact can cause broken objects to be thrown up to 300 ft (92 m). Bystanders should never be within 300 ft (92 m) of an operating rotary mower or within 100 ft (30 M) of a properly equipped disc mower.

Operate Safely

Mower shielding is designed to reduce the risk of thrown objects and must be properly maintained and in place during mowing operations.

The risk of serious injury or death from thrown objects can be significantly reduced by following three rules. **If all of these safety rules are not followed, the mowing operation must be stopped if anyone comes within the safety limit for the mower type.**

First — Inspect the area prior to mowing and remove stones, branches, wire, cable, metal, glass and other solid objects before operating. Any objects that cannot be removed must be clearly marked and carefully avoided by the operator.

In non-crop areas with grass and weeds high enough to hide objects that could be struck by the blades, inspect the area and remove or mark large debris or obstacles.

Mow the area at an intermediate height. Inspect the area closely and remove or mark any remaining debris or obstacles. Mow again at desired final height.

Follow All Mower Safety Rules

Second — Mower-thrown object shielding must be used when operating near roads, parks, populated areas or other areas where thrown objects could injure bystanders or damage property. Follow the manufacturer's operator's manual.

Third — Cross diagonally when mowing through ditches, sharp dips, and drops. Raise the mower to prevent the mower blades from hitting the ground.

Operate Safely

Mower-Thrown Objects (continued)

Disc Mowers — When using a disc mower it is important to know the area to be mowed. If the operator has mowed the field before and is familiar with all obstacles that may be present, it is sufficient to watch ahead of the mower path for any additional objects that may have entered the field. Be ready to stop or avoid any objects that could be hazardous if thrown by the mower. If you plan to mow an unfamiliar field and it is next to a traveled road or people may be within 100 ft (30 m) of the mower you must inspect, and clean or mark the field.

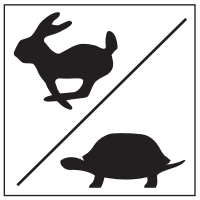
Mowing In Reverse

Do not mow while traveling in reverse. Objects are more likely to be thrown and can travel further.

Shut off the PTO, wait for the blades to stop turning, raise the mower, and then back up.

Mow traveling in the forward direction.

Do Not Mow in Reverse



Use Proper Ground Speed

Mowing Ground Speed

Proper ground speed depends on terrain conditions and grass type, density and height to be cut:
- — Normal ground speed range is 2 to 5 mph.
- — Use slower ground speed for mowing tall, dense grass.
- — Use faster ground speed for mowing medium height, thin grass and under smooth terrain conditions.
- — Use slower ground speed for mowing in rough, sloping or unfamiliar terrain.

Disc mowers are designed to use faster ground speeds for operating in fields clear of debris and surface hazards.

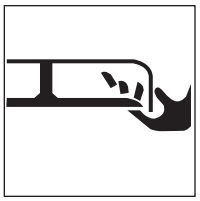
Operate Safely

Extremely Tall Grass Mowing

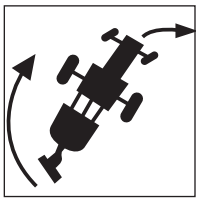
You may need to mow extremely tall, non-crop grass twice. (See page 13, **Mower-Thrown Objects.**)

First mowing pass:
- — Shut the mower and tractor down using proper equipment shut down practice before dismounting tractor. (See page 18, **Proper Equipment Shut Down Practices.**)
- — Inspect the area and remove or mark debris and obstacles.
- — Cut grass higher (10-15 inches) to avoid hidden objects.

Second mowing pass:
- — Shut the mower and tractor down using proper equipment shut down practice before dismounting tractor.
- — Inspect the area and remove or mark debris and obstacles.
- — Cut grass at desired height and, when possible, 90 degrees to the first mowing pass.



Stop Blade Before Unclogging



Provide Adequate Clearance for Mower Swing

Watch Equipment Clearances

Three-point hitch and side-mounted mowers have a larger turning arc than pull-type mowers. Allow sufficient clearance for mower swing while turning.

Do not allow bystanders near the tractor and mower when moving or transporting the tractor and mower.

Operate Safely

Under Mount Mower Safety Practices

When mowing with an under mount mower:

— Keep removable discharge chute in place and over discharge opening.

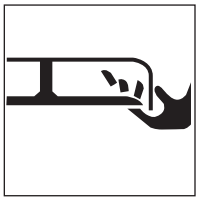
— Never stand on a mower housing when the tractor engine is operating.

— Distribute grass clippings with discharge chute facing mowed area.

— Before clearing a clogged mower or discharge chute, shut down your machine using proper equipment shut down practice. (See page 18, **Proper Equipment Shut Down Practices.**)

Never Stand on Mower – Keep Away

Keep Chute in Place



Stop Blade Before Unclogging

Operate Safely

Wing Or Boom Mower Overhead Obstruction Hazards And Risks

Check for overhead obstructions with raised wing or boom mowers to avoid serious injury or death by contact with:

— Electrical power lines and apparatus.

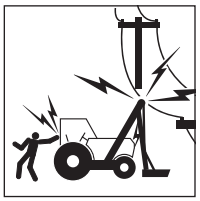
— Low tree limbs.

— Other overhead obstructions.

— Maintain specified distance from power lines and apparatus. Never approach energized power lines or apparatus with any part of your machine unless all local, state/provincial and federal (OSHA) required safety precautions have been taken. Use extreme caution.

DANGER! Avoid electrocution or serious injury from contact with or inadequate clearance to energized power lines or apparatus. **Do not allow the machine or attachment to approach or contact any power line. Do not approach or touch any machine in contact with a power line.**

Do Not Approach Energized Power Lines



Stay Clear of Energized Equipment

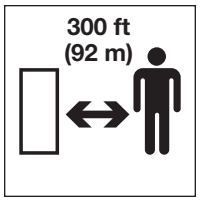
Operate Safely

Wing And Side Mount Mowers Safety Practices

Raised wing positions reduce shielding protection and increases the thrown object and blade contact hazard risks.

Avoid possible serious injury or death by thrown objects or blade contact from raising and lowering wings during mowing operations:

— Do not mow with bystanders within 300 ft (92 m) of the mower.
— Be sure no one is near mower while raising or lowering wings.
— Shut off the PTO and wait for all rotating elements to stop before raising the mower deck or wing section.
— Only raise wing to clear objects in the mowing path or to match ground slope.
— Lower raised wing to ground after clearing object or ground slope conditions.
— Stop mowing if anyone approaches within 300 ft (92 m) of mowing area.



Keep Bystanders Away from Mowing Area

Avoid Hitting Obstructions

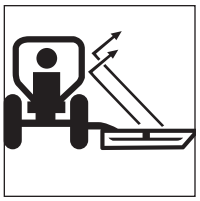
Ditch Bank Mowing Safety Practices

Use extreme care when mowing ditch banks. Watch for washouts, eroded areas and mowing obstructions along the ditch banks. Hitting obstructions with side-mount or boom mowers may swerve the tractor's front end toward the ditch.

Operate Safely

Raised wing and boom mower ditch bank operations may reduce the mower's thrown object shielding effectiveness for the mower operator's protection.

— Use enclosed ROPS cabs, special protective enclosures and other operator shielding available from the manufacturer when performing these operations.
— Inspect mowing area and remove or mark all foreign objects and debris to be avoided by mower.



Use Enclosed ROPS Cabs or Protective Enclosures

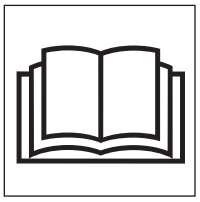
Uneven Terrain Mowing Safety Practices

Tractor and mower stability is reduced on slopes and uneven terrain.

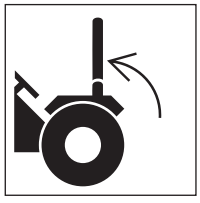
As in all conditions when mowing, use tractors equipped with ROPS and seat belt. **Make sure the ROPS are raised and locked in place and always wear your seat belt.**

Prevent tractor and mower overturns and maintain equipment stability control:

— Review tractor and mower operator's manuals for operating safety practices on slopes and uneven terrain conditions. Explain the practices to those users and operators who cannot read.
— Avoid extremely steep slope operations.



Read and Understand Manuals Before Operating



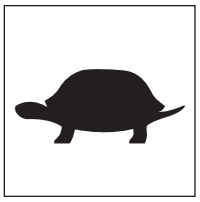
Use ROPS and Seat Belt

Operate Safely

Uneven Terrain Mowing Safety Practices (continued)

— Use extreme care to maintain control over the equipment when operating in these conditions.
— Increase tractor stability by adding wheel weights, ballast and increasing wheel spacing to maximum. Refer to operator's manual for recommendations.
— Maintain minimum ground speed.
— Make wide and gradual turns.
— Avoid sudden starts, stops, and turns when operating up, down, or across slopes.
— **Do not** raise rear-mount or side-mount mowers or mower wings from the ground during these operations.
— Keep alert for holes, bumps, ruts, rocks, stumps or other obstructions that could overturn the machine.
— Avoid slippery ground conditions that could cause loss of control and overturn of tractor and mower.
— Avoid bottoming and striking the ground by diagonal crossing of sharp dips and drops.

Use extreme care in maintaining equipment stability during all uneven terrain and slope mowing operations. You are the final judge as to any slope that can be safely negotiated.



Maintain Control, Use Low Speeds

Add Ballast, Widen Wheel Spacing

Avoid Ruts, Bumps, Holes

Operate Safely

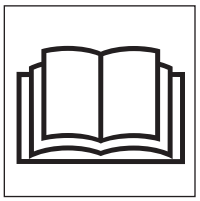
Road Transport Safety Practices

Before operating on public roads:
— Refer to tractor and mower manufacturers' operator's manuals for instructions.
— Explain the instructions to those users or operators who cannot read.
— Check local regulations for required equipment markings, lights, flashers, etc., while traveling on public roads. Lights are required on mowers that obscure tractor taillights and/or warning lights.
— When transporting the mower on a trailer, follow the manufacturer's detailed instructions for loading, tying down and unloading the mower.

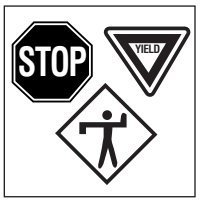
Before transporting on public roads:
— Disengage PTO power to mower.
— Raise mower into transport position and engage transport lock.
— Lock mower wings in the transport position with approved locking devices.
— Attach towing safety chain between pull-type mower and tractor.
— Make sure lights, warning lights and reflectors are in place and visible.
— Check SMV (Slow-Moving Vehicle) emblem for visibility to any rear-approaching vehicle.

While transporting on public roads:
— Obey all local traffic regulations.
— Approach intersections with caution.
— Observe speed and traffic control signs.
— Avoid panic stops and sharp turns.

Be a courteous operator and pull over periodically and allow traffic to pass.



Read and Understand Manuals Before Operating



Obey Traffic Regulations

Park Safely

Parking Safety Practices

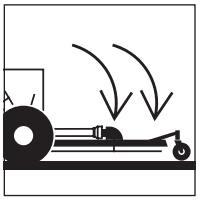
— Use designated or out-of-traffic areas.
— Use firm level ground locations.
— Set parking brake.
— Lower raised equipment to ground.

Shut down the mower and tractor using proper equipment shut down practice before dismounting tractor. (See page 18, **Proper Equipment Shut Down Practices.**)

Sloping ground parking locations:
— Position equipment across slope.
— Set parking brakes.
— Lower raised equipment to ground.
— Block tractor wheels.

Before temporarily parking and leaving disabled equipment near traffic areas:
— Remove equipment from public roads.
— Set out warning flags.
— Use tractor flashing warning lights.

Set Parking Brake



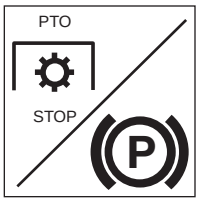
Lower Raised Equipment to Ground

Shut Down Safely

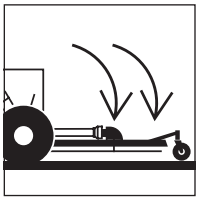
Proper Equipment Shut Down Practices

Make proper equipment shut down an important habit.

Properly shutting down a tractor and mower can prevent accidents from occurring when the mower is left unattended. Shut down the mower following the specific procedures in the manufacturer's operator's manual. These procedures will normally include:
— Reduce engine speed.
— Disengage PTO clutch and transmission drive.
— Idle engine for gradual cooling.
— Place all controls in PARK position.
— Set the parking brake.
— Lower mower to ground.
— Lower wings of wing mowers to ground.
— Shut off engine, lock ignition and remove key from the machine and take it with you.
— Wait for all moving parts to stop before dismounting.
— Relieve hydraulic pressure by moving hydraulic controls several times in all directions.
— Lock anti-vandalism covers and closures, if equipped, when equipment is unattended.
— Dismount carefully maintaining three-point contact.

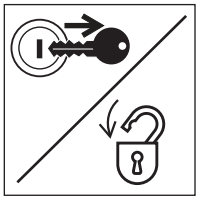


Disengage PTO, Set Brake



Lower Raised Equipment to Ground

Wait for Rotating Parts to Stop

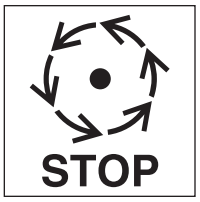


Remove Key, Lock Ignition, Take Key With You

Shut Down Safely

Dismounting Properly

— Never dismount from moving equipment.
— Never jump from any machines.
— Dismount carefully.
— Check for slippery steps.
— Keep feet and hands away from controls.
— Use handholds and steps during dismount.
— Face machine and use three-point contact (2 hands and 1 foot or 2 feet and 1 hand).



Wait for Moving Parts to Stop

Use Three-Point Contact, Face Machine

Perform Maintenance Safely

Maintain Your Equipment

Maintain Equipment

Be sure to maintain the equipment according to manufacturer's instructions. Regularly check the operation of the protective and safety devices.

Do not perform any work on a tractor or mower unless you are authorized and qualified to do so.

If you have been authorized to do maintenance, **read the operator's and service manuals.** Study the instructions; check the lubrication charts; examine all the instruction messages on the machine. Maintenance can be hazardous unless performed properly. Be sure you have the necessary skill, information, correct tools and equipment to do the job.

WARNING! Do not modify equipment or add components not approved by the manufacturer. Use parts, lubricants and service techniques recommended by the manufacturer.

Mower Parts And Your Safety

Mower manufacturers use specific fasteners and specially designed parts to meet mowing operations requirements. Critical parts (self-locking blade bolts, blades, pins, shields and other special items) have specific strength, design and fit requirements for the make and model mower you are using.

Avoid possible death or serious injury from unapproved parts or modifications:
— Do not substitute common hardware for original manufacturer's blade bolts or other special part items.
— Do not substitute for blades, pins, shields or other critical parts.
— Do not use higher strength bolts to replace original manufacturer's shear bolts.

Perform Maintenance Safely

Prepare Yourself

Wear personal protective clothing and Personal Protective Equipment (PPE) issued to you or called for by job conditions. You must **ALWAYS** wear safety glasses with side shields.

You may also need:
— Hard hat
— Safety shoes
— Safety glasses, goggles or face shield
— Apron and gloves
— Hearing protection
— Welding helmet or goggles
— Respirator or filter mask

Wear whatever is needed—don't take chances.

Keep hands—and clothing—away from all moving parts. Don't wear dangling ties, loose sleeves, rings, watches, or long hair.

WARNING! Prevent death or serious injury from entanglement. **Do not wear loose clothing or accessories. Stay away from all rotating components when the engine is running.** Contact, wrapping or entanglement with rotating or moving parts could result in death or serious injury.

Avoid Rotating Parts

Avoid Pinch Points

Perform Maintenance Safely

Wear a rubber apron and rubber gloves when working with corrosives. Wear gloves and safety shoes when handling wooden blocks or sharp-edged metal.

Always use safety glasses, goggles or a face shield. They provide eye protection from fluids under pressure, during grinding and while servicing batteries. Protection is also needed from flying debris, liquids and loose material produced by equipment, tools and pressurized air/water.

Wear a face shield and follow manufacturer's instuctions when you disassemble spring-loaded components or work with battery acids. Wear a welding helmet or goggles with a shaded filter when you weld or cut with a torch.

Do not sand, grind, flame-cut, braze or weld without a NIOSH-approved respirator or appropriate ventilation. If welding is required on this machine, refer to the manufacturer's operator's or service manuals or consult your equipment dealer for proper procedures.

Keep pockets free of all objects that could fall out—and drop into machinery.

Handle tools and heavy parts sensibly—with regard for yourself and other persons. Lower items—don't drop them.

Clean Slippery Surfaces

Ventilate Work Area

Prepare The Work Area

— Position the mower in a level area out of the way of other working equipment.
— Make sure there is adequate light, ventilation and clearance.
— Remove oil, grease or water to eliminate any slippery surfaces.
— Clean around the area to be serviced to minimize contamination.

Perform Maintenance Safely

Prepare The Machine

Stored energy sources (electrical, mechanical, hydraulic, pneumatic, chemical, thermal, etc.) must be controlled or reduced to a practical minimum before performing any maintenance, repair or service procedures.

Safety practices to prevent potential injuries from energy-releasing sources:

— Disengage PTO before shutting off engine.
— Place controls in PARK or NEUTRAL before shutting off engine.
— Set parking brake or block wheels.
— Allow all moving parts to stop.
— Lower mower to ground.
— Lower wings to ground on wing mowers.
— Shut off tractor engine.
— Relieve hydraulic system pressure by moving controls several times in all directions.
— Lock ignition, remove key and take it with you.
— Look and listen for evidence of moving parts before dismounting.
— Securely support or block up mower before working underneath mower or other lifted components.
— Securely support, block up, or lock up mower wings with approved locking devices before working near or underneath a wing mower.
— Relieve pressure before disconnecting or disassembling any pressurized system.
— Block or relieve spring pressure before disassembling any spring-loaded mechanism.
— Securely support or block up any raised machine component before working on it.
— Avoid flames, sparks, or smoking near any fuel, hydraulic fluid or other flammable material such as mowing debris.

Prepare Machine Systems for Service

Perform Maintenance Safely

Attach a “DO NOT OPERATE” warning tag to the control levers and remove the ignition key if the mower should not be operated. Take the key with you.

Install approved support device(s) when working under or near raised equipment.

WARNING! Unsupported raised mowers or other equipment may drop unexpectedly. **Never go under equipment when raised unless supported by an approved support device(s).** Death or serious crushing injury could result from falling equipment.

Remove only guards or covers that provide access to the area being serviced. Replace all guards and covers when work is complete.

Use a “Do Not Operate” Tag

Use Approved Support Device

Replace All Guards

Perform Maintenance Safely

Use Proper Ventilation

If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension. If you do not have an exhaust pipe extension, make sure you open the doors and get outside air into the area.

WARNING! Prevent possible injury. **Never work on machinery with the engine running unless instructed by the manufacturer's manuals for specific service.**

WARNING! Never operate any type of engine without proper ventilation—EXHAUST FUMES CAN KILL.

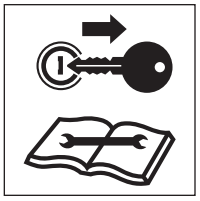
Use Jacks And Hoists Carefully

Safety stands or blocks must be located on a rigid part of the mower. Do not position stands under axles or wheel supports that may rotate.

If you must work beneath raised equipment, always use wood—**not concrete**—blocks, jack-stands or other rigid and stable supports. When using jacks or hoists always be sure they are adequately supported.

WARNING! Prevent possible crushing injury. **Never use concrete blocks for supports.** They can collapse under even light loads.

Make sure the hoists or jacks you use are in good repair. Never use jacks with cracked, bent, or twisted parts. Never use frayed, twisted or pinched cables. Never use bent or distorted hooks.



Remove Key and Read Maintenance Manual

Ventilate Work Area

Use Proper Support for Raised Equipment

Perform Maintenance Safely

Common Maintenance Safety Practices

Fuel Hazards

WARNING! Always use approved fuel containers and/or dispensing equipment.

Fuels are flammable, so observe these practices to reduce the possibility of a serious accident.

- — Shut off engine and ignition during refueling.
- — Always ground the fuel nozzle against the filler neck to avoid sparks.
- — Keep sparks and open flames away from fuel.
- — Do not smoke while refueling or when handling fuel containers.
- — Do not cut or weld on or near fuel lines, tanks or containers.
- — Do not overfill the tank or spill fuel. Clean up spilled fuel immediately.

Engine Coolant Hazards

Liquid cooling systems build up pressure as the engine gets hot, so **use extreme caution before** removing the radiator cap.

Be sure to:

- — Stop the engine and wait for the system to cool.
- — Wear protective clothing and safety glasses.
- — Turn the radiator cap slowly to the first stop to allow the pressure to escape before removing the cap completely.

No Smoking and No Open Flames

Remove Radiator Cap Slowly

Perform Maintenance Safely

Hydraulic System Hazards

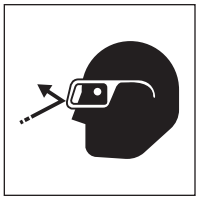
The hydraulic system is under pressure whenever the engine is operating and may hold pressure even after the engine is shut off. Cycle all hydraulic controls including the auxiliary hydraulic control after the engine is shut down. Relieve trapped pressure in the lines after the attachments are shut down and resting on the ground.

During inspection of the hydraulic system:
— Wait for fluid to cool before disconnecting the lines. Hot hydraulic fluid can cause SEVERE BURNS.
— **Do not** use your hand to check for leaks. Instead, use a piece of cardboard or paper to search for leaks.
— Wear appropriate eye protection. Hydraulic fluid can cause permanent eye injury.

WARNING! Hydraulic fluid under pressure can penetrate the skin or eyes and cause serious injury, blindness or death. Fluid leaks under pressure may not be visible. **Use a piece of cardboard or wood to find leaks, not your hand. Wear a face shield or safety goggles for eye protection.** If fluid is injected into the skin, it must be removed within a few hours by medical personnel familiar with this type of injury.

When venting or filling the hydraulic system, loosen the filler cap slowly and remove it gradually.

Never reset any relief valve in the hydraulic system to a pressure higher than recommended by the manufacturer.



Perform Maintenance Safely

Electrical System Hazards

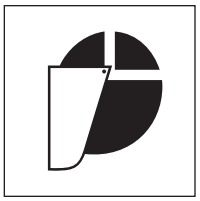
Before working on the electrical system, disconnect the battery cable(s).
— Remove the battery negative (-) cable(s) first.
— When reconnecting the battery, connect the battery negative (-) cable(s) last.

The liquid in batteries contains acid, which is a POISON and can cause SEVERE CHEMICAL BURNS.

Avoid Injury

— Wear a face shield to prevent contact with your eyes.
— Wear chemical-resistant gloves and clothing to keep electrolyte off your skin and regular clothing.

WARNING! Electrolyte will damage eyes or skin on contact. **Always wear a face shield to avoid electrolyte in eyes.** If electrolyte contacts eyes, flush immediately with clean water and get medical attention. **Wear chemical-resistant gloves and protective clothing to keep electrolyte off skin.** If electrolyte contacts exposed skin or clothing, wash off immediately with clean water. **If electrolyte is ingested,** seek medical attention immediately. NEVER give fluids that would induce vomiting.



Perform Maintenance Safely

Avoid Explosion

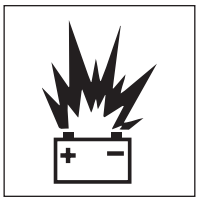
WARNING! Avoid possible serious injury from explosion. Lead-acid batteries produce extremely explosive gases especially when being charged. **Keep arcs, sparks, flames and lighted tobacco away.**

— **Do not** smoke near batteries.
— Keep arcs, sparks and open flames away from batteries.
— Provide adequate ventilation.

Never check the battery by placing a metal object across the battery posts — the resulting spark could cause an explosion.

WARNING! Avoid possible serious injury from battery explosion. **Do not charge a battery or boost start the engine if the battery is frozen.** Warm to 60°F (15.5°C) or the battery may explode and could cause serious injury.

Safety rules during battery boost starting:
— Follow the instructions for proper "battery boost starting" as specified in the manufacturer's manual.
— Be sure the machines are not touching.
— Observe the polarity of the batteries and connections.
— Make the final cable connection to the engine or the furthest ground point away from the battery. Never make the final connection at the starter or dead battery—sparks may ignite the explosive gases present at the battery.
— When disconnecting cables after jump starting, remove the cables in reverse order of connection (e.g., final connection first).



Avoid Sparks and Open Flames Near Batteries

For Boost Starting Observe Polarity and Make Final Connection at Ground Point

Perform Maintenance Safely

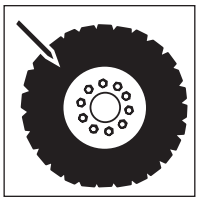
Tire And Wheel Maintenance

Check your tires and wheels daily because the stability of the tractor and mower can be dramatically affected by tire pressure or damage to tires or wheels.

Check tires for:
— Correct pressure.
— Cuts and bulges.
— Nails or other punctures.
— Uneven or excessive wear.
— Condition of valve stems and caps.

Check wheels for:
— Damage to the rims.
— Missing or loose lug nuts or bolts.
— Misalignment.

All tire service should be performed by a qualified tire service center or by an authorized service person who has been properly trained in the procedures and use of safety equipment designed for tire servicing.



Check Tires and Wheels for Damage

Maintain Proper Tire Pressure

Perform Maintenance Safely

Tire And Wheel Maintenance (continued)

WARNING! The types of wheels and tires usually found on this equipment require special care when servicing to prevent death or serious injury.

Do not inflate the tires above the recommended pressure. Be sure to replace tire ballast if equipped. See manufacturer's specifications for ballast requirements.

Keep wheel lug nuts tightened to manufacturer's recommendations.

A rise in tire pressure during operation is normal, and should NOT be reduced.

Never reinflate a tire that has been run flat or seriously underinflated without removing the tire from the wheel. Have the tire and wheel closely inspected for damage before remounting.

When adding air to a tire, do so from a distance. Use a long hose with self-attaching chuck. Always stand behind tread when adjusting tire pressure.

Do not inflate tires with flammable gases or from systems using an alcohol injector.

Never cut or weld on a wheel with an inflated tire mounted on it. This could cause explosive decompression.

Check that the tire size and wheel are correctly matched.

When replacing the tires, ensure the tires are of the appropriate rating specified by the manufacturer.

Tires should not be operated at speeds higher than their rated speed. Most agricultural tires are rated for 20mph maximum speed.

Perform Maintenance Safely

Complete Service And Repairs Before Machine Is Released

Tighten all bolts, fittings, and connections to torques specified by the manufacturer.

Install all guards, covers, and shields after servicing. Replace or repair any damaged parts. Refill and recharge pressure systems only with manufacturer approved or recommended fluids.

Start the engine and check for leaks. (See page 23, **Hydraulic System Hazards.**) Operate all controls to make sure the tractor and mower are functioning properly. Test the machine if necessary. After testing, shut down and check the work you performed. Are there any missing cotter pins, washers, locknuts, etc.? Recheck all fluid levels before releasing the equipment for operation.

All parts should be inspected during repair and replaced if worn, cracked or damaged. Excessively worn or damaged parts can fail and cause injury or death.

Replace any damaged or illegible safety signs.

Mower Blade Maintenance

Do not take chances using damaged or bent blades. The mower manufacturers from the Association of Equipment Manufacturers (AEM) and the Farm Equipment Manufacturers Association (FEMA) advocate that you DO NOT reuse, straighten, hard face or weld mower blades. Death or serious injury could result if a broken blade is thrown from a mower.

Perform Maintenance Safely

Mower Blade Maintenance (continued)

— **How are mower blades made?** Mower blades are made of high strength alloy spring steel. They are hot-forged and shaped to meet the manufacturer's individual specifications, then heat treated and tempered to a high strength, ductile state to reduce the possibility of breaking while mowing. Blades are tested to ensure they meet strength, hardness, and ductility standards. If a blade fails to meet any of these specifications, it will not be used on the mower.

— **What happens when a mower blade bends?** It takes a great amount of impact force to bend the blade. This impact force often results in the blades being gouged or chipped. After a blade is damaged by a gouge or chip a blade failure is much more likely to occur. When a blade is severely bent, a microscopic crack may be created in the blade. Straightening the blade does not remove or repair this crack, but may cause additional cracks. Additional stresses during mowing operations can result in an unexpected blade failure.

— **Avoid bending blades.** Help prevent mower blades from bending or cracking by avoiding contact with solid objects. Mower blades are intended to cut grass, shrubs, woody vegetation, and small trees and limbs. They are not intended to contact solid objects such as rocks, concrete, or steel posts. Inspect the area prior to mowing. Remove or clearly mark any solid objects and mow around them.

— **Replace damaged blades!** Inspect the mower blade(s) daily or after hitting any solid object. If a mower blade becomes damaged (bent, gouged, cracked) or worn more than 25 percent of the original size, it should be removed and replaced with a new blade. Always use the original manufacturer's blades. Aftermarket brand blades may not meet the mower manufacturer's strength, hardness and ductility requirements.

— **Do not take chances mowing with damaged or bent blades.** Using a damaged or straightened mower blade can result in the blade breaking and being thrown into the operator or a bystander causing death or serious injury. The price of a new blade is small compared to the potential for the serious injury that could result from a bent or broken blade being thrown from the mower.

Final Word To The User

You have just finished reading the AEM Industrial and Agricultural Mower Manual. It is impossible for this manual to cover every safety situation that you may encounter on a daily basis. Your knowledge of these safety precautions and your application to the basic rules of safety will help to build good judgment in all situations. Our objective is to help you develop, establish and maintain good safety habits to make operating an Industrial and Agricultural Mower easier and safer for you.

This manual is another in a series on the safe operation of machinery published by AEM.
Many pictorials in this safety manual can be found and downloaded at http://pictorials.aem.org.
For additional publications visit our website at www.safetymaterials.org.

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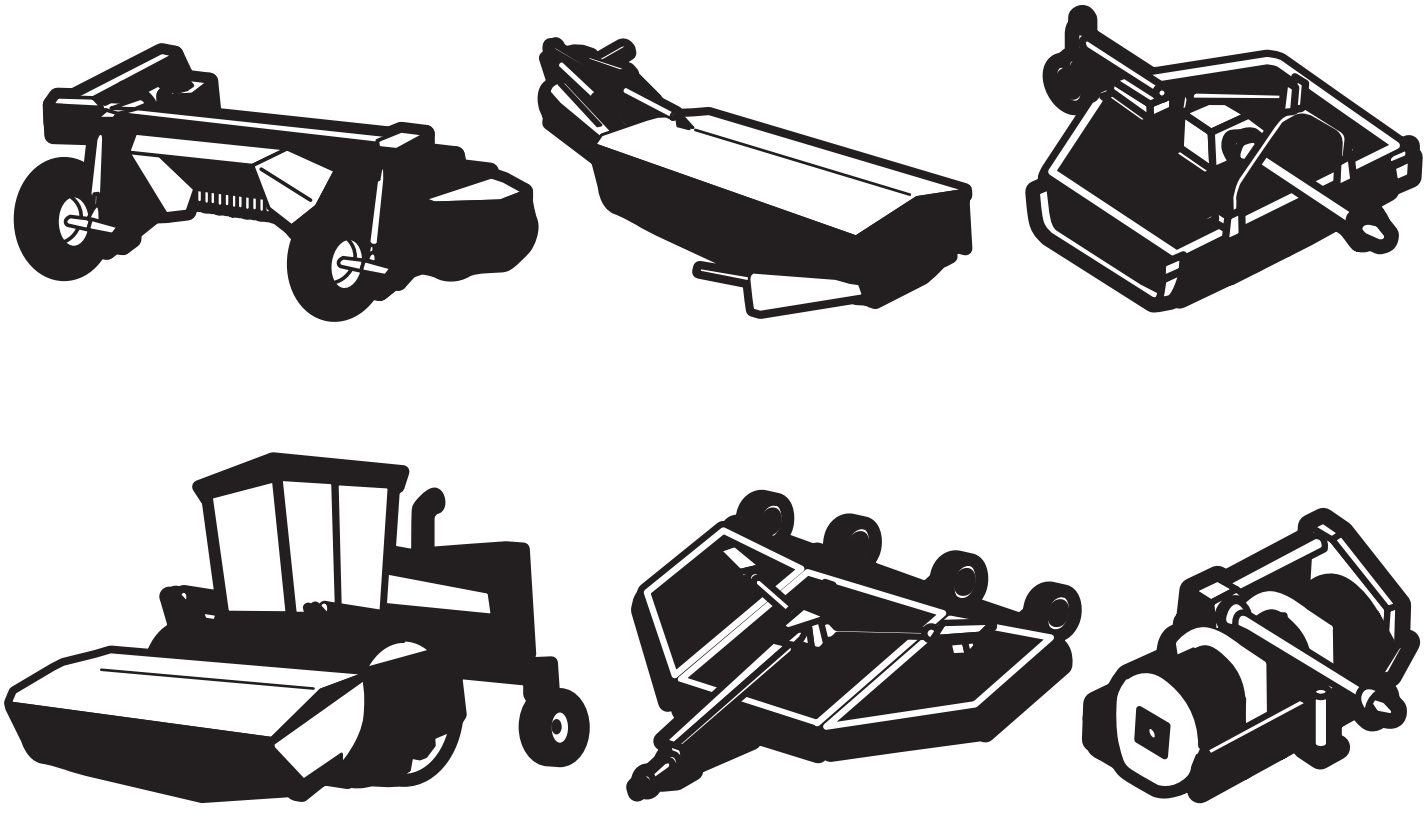
CORTADORA
DE CÉSPED INDUSTRIAL/
PARA AGRICULTURA

www.aem.org

MANUAL DE SEGURIDAD

PARA EL PERSONAL DE OPERACIONES Y MANTENIMIENTO



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Reconocimiento

Deseamos reconocer las contribuciones de los miembros del Consejo de Fabricantes de Cortadoras de Césped Industriales/para Agricultura para la preparación de este Manual de seguridad.

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Introducción

Este manual de seguridad está destinado a señalar algunas de las situaciones de seguridad básicas que pueden surgir durante la operación y el mantenimiento normales de la máquina y a instruirlo en prácticas de seguridad para manejar estas condiciones. Este manual **NO** sustituye los manuales del operador del fabricante de la cortadora de césped.

Puede ser necesario tomar precauciones adicionales o algunas de las instrucciones pueden no ser pertinentes, dependiendo del equipo, los accesorios y las condiciones del sitio de trabajo o del área de servicio. El fabricante no tiene control directo sobre la aplicación, la operación, la inspección o el mantenimiento del equipo. Por lo tanto, es **SU** responsabilidad utilizar prácticas de seguridad correctas en estas áreas.

La información que se proporciona en este manual complementa la información específica sobre la máquina que contienen los manuales del operador del fabricante. Puede haber otra información que afecte la operación segura de la máquina en los letreros de seguridad o en los requisitos del seguro, programas de seguridad y capacitación del empleador, códigos de seguridad, leyes federales, locales, estatales o provinciales, reglas y ordenanzas.

Lea y asegúrese de comprender los manuales antes de comenzar la operación

¡IMPORTANTE! Antes de hacer funcionar la cortadora de césped, asegúrese de contar con los manuales del operador del fabricante para esta máquina y todos los accesorios. Si faltan los manuales del fabricante, solicite manuales de repuesto a su empleador, al concesionario de los equipos o directamente al fabricante. Guarde este manual de seguridad y los manuales del fabricante con la máquina en todo momento. Lea y asegúrese de comprender todos los manuales.

Se encuentra disponible el video AEM Mower Safety Practices (Prácticas de seguridad para la cortadora de césped de AEM) para capacitar y reforzar prácticas de seguridad correctas. Se alienta a los operadores a ver periódicamente el video de seguridad.

Alertas de seguridad

Símbolo

Este símbolo de alerta de seguridad significa:
“¡ATENCIÓN! ¡MANTÉNGASE ALERTA! ¡SU SEGURIDAD ESTÁ EN RIESGO!”

El símbolo de alerta de seguridad identifica mensajes de seguridad importantes sobre el equipo, sobre letreros de seguridad, en manuales u otros lugares. Cuando vea este símbolo, manténgase alerta ante la posibilidad de muerte o lesiones personales. Siga las instrucciones del mensaje de seguridad.

Motivos por los cuales la seguridad es importante:
— Los accidentes provocan discapacidad y muerte.
— Los accidentes cuestan.
— Los accidentes pueden evitarse.

Palabras indicativas

Las palabras indicativas son palabras distintivas que típicamente se encontrarán en letreros de seguridad de la cortadora de césped y otros equipos del sitio de trabajo. Estas palabras también se pueden encontrar en este manual y en los manuales del fabricante. Están destinadas a alertar al operador sobre un riesgo y el grado de gravedad del riesgo.

⚠ DANGER
PELIGRO
DANGER (PELIGRO) indica una situación riesgosa que, si no se evita, resultará en una lesión grave o la muerte.

⚠ WARNING
ADVERTENCIA
WARNING (ADVERTENCIA) indica una situación riesgosa que, si no se evita, podría resultar en una lesión grave o la muerte.

⚠ CAUTION
PRECAUCIÓN
CAUTION (PRECAUCIÓN) indica una situación que, si no se evita, podría resultar en lesiones leves o moderadas.

NOTICE
AVISO
NOTICE (AVISO) indica un mensaje de daños a la propiedad.

Palabras para el usuario/operador

Es **SU** responsabilidad leer y asegurarse de comprender el manual de seguridad y los manuales del fabricante antes de hacer funcionar esta máquina. Este manual de seguridad lo lleva paso a paso a través de su día de trabajo.

El reconocimiento de los riesgos y la prevención de accidentes dependen de que usted esté alerta, sea cuidadoso y se capacite correctamente para la operación, el transporte, el mantenimiento y el almacenamiento de este equipo.

Se han suministrado gráficos útiles para comprender el texto.

Recuerde que **USTED** es la clave de la seguridad. Las prácticas de seguridad correctas lo protegen no sólo a usted sino también a las personas que lo rodean. Estudie este manual y los manuales del fabricante para su máquina en particular. Transfórmelos en una parte activa de su programa de seguridad. Tenga presente que este manual de seguridad está escrito para cortadoras de césped industriales/para agricultura.

Contáctese con el fabricante del equipo si le queda alguna pregunta sobre la operación segura después de estudiar los manuales del operador del fabricante y este manual de seguridad.

Tome todas las demás precauciones habituales y acostumbradas para un trabajo seguro y, sobre todo:

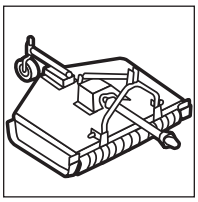
RECUERDE:
¡LA SEGURIDAD DEPENDE DE USTED!

¡PUEDE EVITAR LESIONES GRAVES O MUERTE CAUSADAS POR PRÁCTICAS LABORALES NO SEGURAS!

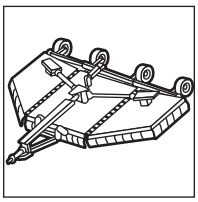
Cortadora de césped industrial/para agricultura

Tipos de cortadora de césped industrial/para agricultura

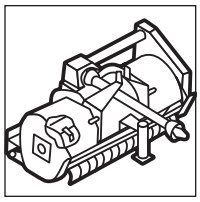
Las cortadoras de césped se usan para recortar pasturas, desmenuzar residuos de cultivos, cortar arbustos, realizar desbroce pesado, cortar la hierba en vías de agua, derechos de paso, costados de caminos o autopistas. Además, estas cortadoras se usan para cortar la hierba y otras plantas en zonas públicas como parques y cementerios.



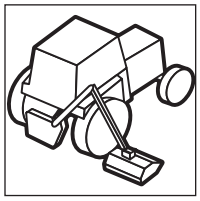
Giratorio



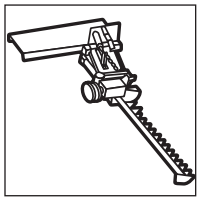
Giratorio con lateral plegable



Triturador



Aguilón

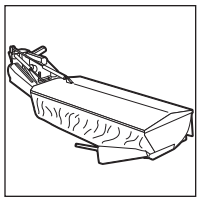


Barra en forma de hoz

Cortadora de césped industrial/para agricultura

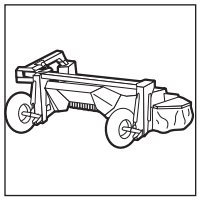
Tipos de cortadora de césped de disco para agricultura

Las cortadoras de césped de disco están diseñadas y equipadas para cortar cultivos de heno a mayor velocidad de desplazamiento.



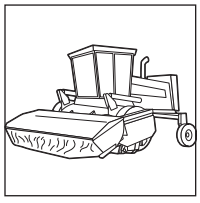
Cortadora de césped de disco

Las cortadoras/acondicionadoras de disco cortan y acondicionan los cultivos.



Cortadora/ acondicionadora de disco

Las formadoras de hileras autopropulsadas cortan el heno y lo acondicionan en hileras.



Formadora de hileras autopropulsada

Cumplimiento del programa de seguridad

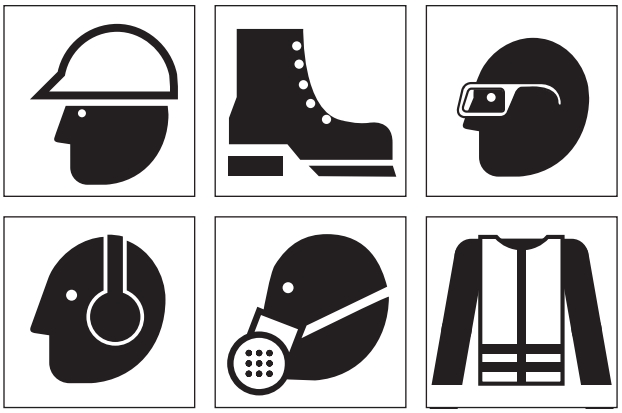
Protéjase a sí mismo

Use la ropa de protección personal y los equipos de protección personal (PPE) que se le proporcionen o que requieran las condiciones del trabajo. **SIEMPRE** debe usar gafas de seguridad con escudos laterales.

Puede necesitar también:
— Casco
— Calzado de seguridad
— Antiparras de seguridad o protección facial
— Guantes gruesos
— Protección para oídos
— Indumentaria reflectiva
— Indumentaria impermeable
— Respirador o máscara con filtro

Use la ropa necesaria; no corra ningún riesgo.

¡ADVERTENCIA! Evite lesiones graves o muerte por enredos. **No use ropa floja ni accesorios. Ate el cabello largo. Manténgase alejado de todos los componentes giratorios cuando el motor está en funcionamiento.** El contacto, el enrollado o el enredo con piezas giratorias o móviles podrían resultar en lesiones graves o la muerte.



Cumplimiento del programa de seguridad

— Lea, asegúrese de comprender y siga las instrucciones escritas del fabricante que se encuentran en el manual del operador y en los letreros de seguridad sobre la cortadora y el tractor.
— Obtenga capacitación para la operación de la cortadora y el tractor.
— Aproveche los programas de capacitación que se ofrecen en su zona.
— Solicítele al distribuidor de equipos o al supervisor que le explique cualquier información que no comprenda.
— Explique las instrucciones escritas de los manuales del operador y los letreros de seguridad a los usuarios u operadores que no puedan leerlas.
— Inspeccione la cortadora y el tractor diariamente antes de hacerlos funcionar. Asegúrese de que todas las guardas se encuentren en su lugar y de que el equipo funcione correctamente.
— Nunca fume mientras lo está manejando. Nunca llene el depósito de combustible con el motor en funcionamiento o cerca de una llama abierta.
— Asegúrese de tener visibilidad adecuada e iluminación suficiente.
— Sepa cuáles son los puntos donde puede quedar atrapado y las partes giratorias. Su conocimiento puede evitar accidentes.
— Nunca intente hacer funcionar los controles, excepto desde el asiento del operador. Las funciones controladas de manera incorrecta pueden producir el movimiento imprevisto de la máquina y resultar en lesiones graves o muerte.
— Apague la cortadora y el tractor antes de descender. (Consulte la página 18, **Prácticas correctas de apagado de los equipos.**)

Lea, asegúrese de comprender y siga las indicaciones de los manuales y los letreros de seguridad

Evite las partes giratorias

Sepa cuáles son y evite los puntos donde pueda quedar atrapado

Cumplimiento del programa de seguridad

Evite las lesiones provocadas por equipos elevados

Evite posibles lesiones de aplastamiento por caídas de la cortadora u otros equipos elevados.

Evite ser aplastado – Bloquee o apoye con seguridad la cortadora

Antes de trabajar cerca o debajo de partes levadas de la cortadora o de los equipos:

— Apoye o bloquee con seguridad las partes elevadas de la cortadora o los equipos de acuerdo con el manual del operador.
— Apoye, bloquee o trabe con seguridad los laterales con dispositivos de bloqueo aprobados o descienda las partes de la cortadora o de los equipos hasta el suelo.
— Use trabas de transporte cuando transporte la cortadora por la vía pública.

Evite lesiones producidas por líquidos a alta presión

Evite las lesiones por inyección de fluidos debidas a fugas de líquidos a alta presión.

Si un fluido se inyecta en la piel, debe ser extraído dentro de pocas horas por personal médico familiarizado con este tipo de lesión.

Las fugas de fluido bajo presión pueden no ser visibles. Al verificar en busca de fugas o cuando trabaja cerca de sistemas presurizados:

— Lea las prácticas de seguridad recomendadas en los manuales del operador del fabricante.
— Use una protección facial o antiparras de seguridad para proteger los ojos.
— Use un cartón o una madera para buscar fugas; **NO use las manos.**
— Alivie la presión del sistema antes de desconectar líneas.
— Busque y repare las líneas, los tubos y las mangueras dañados o con fugas.
— Busque y apriete las conexiones flojas.
— Purgue el aire del sistema antes de hacerlo funcionar.

El fluido a alta presión puede inyectarse en el cuerpo

Cumplimiento del programa de seguridad

Evite lesiones por incendios y explosiones

Aplique el freno de estacionamiento, apague el motor de la cortadora y del tractor y retire la llave mientras llena el depósito de combustible. Tenga precaución adicional cuando carga combustible en un motor caliente. Nunca fume mientras carga combustible. Evite las chispas conectando a tierra la boquilla de combustible contra el cuello de llenado del depósito.

Los vapores de un depósito de combustible vacío son explosivos. Nunca suelde o realice cortes en líneas, depósitos o contenedores de combustible.

Retire toda la basura o los residuos de corte de la máquina todos los días o según sea necesario. Mantenga los residuos alejados del motor, el escape, los embragues y otras fuentes de calor. Use supresores de chispas, según corresponda, en el sistema de escape del motor. Asegúrese de que no haya trapos con aceite u otro material inflamable almacenado en la máquina.

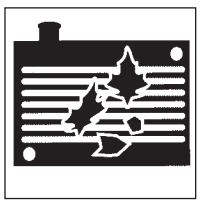
Revise en busca de fugas de combustible, aceite o fluido hidráulico. Repare las fugas y limpie la máquina antes de hacerla funcionar.

El éter/fluido para arranque en frío es inflamable. No fume cuando usa éter/fluido para arranque en frío. Siempre siga las instrucciones del recipiente y de los manuales del operador del fabricante correspondientes a la cortadora de césped. No use éter/fluido para arranque en frío si el motor está equipado con bujías de precalentamiento u otro dispositivo de precalentamiento.

Siempre use solvente no inflamable para limpiar las partes. No use gasolina, combustible diesel u otros fluidos inflamables. Almacene todos los fluidos y materiales inflamables lejos de la máquina y de la zona de trabajo.

Sepa dónde se guardan los extintores de incendios, cómo funcionan y para qué tipo de incendio están destinados. Verifique la disponibilidad de los extintores de incendios de acuerdo con las instrucciones del fabricante. Asegúrese de que cada tractor esté equipado con un extintor de incendios.

No fumar; evitar las llamas abiertas



Retire los residuos a diario o según sea necesario

Cumplimiento del programa de seguridad

¡Manténgase alerta!

Sepa dónde obtener asistencia. Sepa cómo usar un equipo de primeros auxilios y un extintor de incendios/ sistema de supresión de fuego.

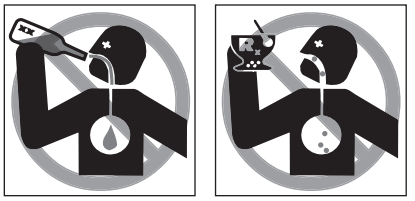
¡Manténgase informado!

Aproveche los programas de capacitación que se ofrecen.

¡Tenga cuidado!

El error humano es causado por muchos factores: descuido, fatiga, sobrecarga, preocupación, desconocimiento de la máquina por parte del operador, fármacos y alcohol, entre muchos otros. Los daños al tractor o la cortadora de césped se pueden arreglar en un tiempo breve, pero las lesiones o la muerte tienen un efecto perdurable.

Por su seguridad y la de los demás, aliente a sus compañeros de trabajo a actuar con seguridad.



Nunca use fármacos o alcohol mientras está operando la máquina

Para una operación segura

Usted debe ser un operador cualificado y autorizado para operar la máquina correctamente. Debe comprender claramente las instrucciones por escrito que proporciona el fabricante, recibir capacitación (que incluya la operación real de la cortadora de césped) y conocer las reglas y ordenanzas de seguridad correspondientes al sitio de trabajo. Una buena práctica de seguridad consiste en señalar y explicar los letreros y las prácticas de seguridad y asegurarse de que otras personas comprendan la importancia de seguir estas instrucciones.

¡ADVERTENCIA! Los fármacos y el alcohol afectan la capacidad de alerta y de coordinación del operador, así como su capacidad para operar los equipos con seguridad. **Nunca use fármacos o alcohol mientras opera el equipo de la cortadora. Nunca permita a sabiendas que otra persona opere esta máquina con la capacidad de alerta o coordinación deteriorada.** Un operador que toma un medicamento recetado o de venta libre debe consultar a un profesional médico con respecto a los efectos colaterales del medicamento que podrían reducir su capacidad de operar este equipo con seguridad.

Cumplimiento del programa de seguridad

Conozca las reglas

La mayoría de los empleadores tienen reglas que rigen la operación y el mantenimiento de los equipos. Antes de comenzar a trabajar en una ubicación nueva, verifique con el supervisor o con el coordinador de seguridad. Averigüe sobre las reglas que tendrá que obedecer.

La Administración de Seguridad y Salud Ocupacional (Occupational Safety and Health Administration, OSHA) hace cumplir leyes federales dentro de los EE.UU. que se aplican a la operación, la aplicación y el mantenimiento seguros de equipos en un sitio de trabajo. Es responsabilidad del empleador cumplir estas leyes. Un representante de OSHA puede visitar periódicamente un sitio de trabajo para ver si estas leyes se cumplen.

También puede haber leyes estatales/provinciales o locales u ordenanzas internacionales que se apliquen a este equipo y a su uso, junto con reglas específicas del sitio de trabajo o del empleador. Es importante que conozca y cumpla todas las leyes y reglas aplicables, incluso las que requieren capacitación y certificación del operador.

Las siguientes son algunas de las reglas que debe cumplir al trabajar:

— Un ROPS (sistema de protección antivuelco) y un tractor equipado con cinturón de seguridad es exigencia del gobierno federal (OSHA) par ala protección de los operadores durante el funcionamiento de la cortadora. Una cabina cerrada proporciona protección adicional para el operador con respecto a objetos arrojados. Verifique el manual del operador de la cortadora de césped para ver si también se requiere una cabina de tractor.
— Use y verifique que otras personas usen la indumentaria y los equipos de protección personal correctos.
— Inspeccione la máquina y los accesorios antes de cada uso según lo especificado por el fabricante y por su empleador.
— Conozca las limitaciones y las características operativas del equipo de corte de césped. No haga un uso indebido.
— Verifique que todos los escudos y las guardas estén correctamente instalados antes de hacer funcionar la máquina.
— Nunca modifique o retire partes de la máquina (excepto para realizar servicios; después, asegúrese de que se vuelvan a colocar en su lugar).

Sepa cuáles son y asegúrese de comprender las reglas de funcionamiento

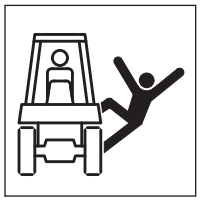
Cumplimiento del programa de seguridad

Algunas reglas que debe cumplir al trabajar (continuación)

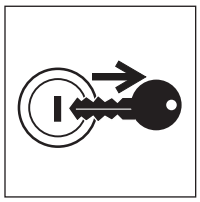
— Únicamente personas cualificadas y autorizadas pueden manejar estos equipos.
— **Nunca permita que los niños jueguen** en los equipos, **viajen** en ellos o los hagan **funcionar**. Los niños **no están** cualificados para manejar estos equipos.
— **No** transporte pasajeros.
— Use contacto en tres puntos (asideros y peldaños) y enfrente el equipo al ascender o descender de él.
— Mantenga a las personas ajenas a 300 pies (92 m) de la operación de corte.
— Familiarícese con el sitio de trabajo antes de usar la cortadora de césped. Tenga en cuenta posibles riesgos que puede encontrar en el terreno. Retire o marque los obstáculos y residuos que podrían dañar la cortadora o ser arrojados por ella.
— Utilice sólo accesorios y partes aprobados por el fabricante de la cortadora de césped.
— Asegúrese de que todos accesorios estén descendidos, aplique el freno de estacionamiento, apague el motor y haga funcionar todas las palancas de control. Retire la llave antes de salir del tractor. (Consulte la página 18, **Prácticas correctas de apagado de los equipos.**)
— Cuando transporte la cortadora de césped en un remolque, siga las instrucciones detalladas del fabricante para la carga, el amarre y la descarga de la cortadora.

Mantenga a los niños alejados de los equipos

Mantenga a las personas ajenas alejadas



No lleve pasajeros



Apague los equipos cuando están sin vigilancia

Cumplimiento del programa de seguridad

Conozca los equipos

Lea y asegúrese de comprender los letreros de seguridad que indican PELIGRO, ADVERTENCIA, PRECAUCIÓN y AVISO y otros letreros informativos que hay sobre el tractor y la cortadora de césped y en el manual del operador del fabricante. Solicítele al supervisor o al distribuidor de la cortadora que le explique cualquier información que no comprenda. El incumplimiento de las instrucciones de seguridad podría resultar en lesiones graves o muerte.

Lea y asegúrese de comprender todos los letreros de seguridad

Asegúrese de que todas las estructuras de protección, guardas, escudos, pantallas y paneles del fabricante están bien reparados, en su lugar y bien ajustados. Los componentes de seguridad dañados, faltantes o debilitados pueden crear una situación de riesgo para usted como operador. **Nunca** retire o modifique ningún componente de seguridad (incluso escudos para objetos arrojados) que haya en la cortadora.

Conozca lo siguiente sobre el tractor y la cortadora de césped:

— Funcionamiento, propósito y uso de todos los controles.
— Velocidades de funcionamiento correctas.
— Capacidades y funcionamiento correcto en pendientes y terrenos desparejos.
— Características del frenado y la dirección.
— Radio de giro y separaciones.
— Cómo detener los equipos rápidamente en una emergencia.

Lea y asegúrese de comprender los manuales antes de comenzar la operación

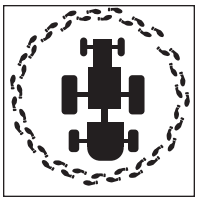
Preparación para una operación segura

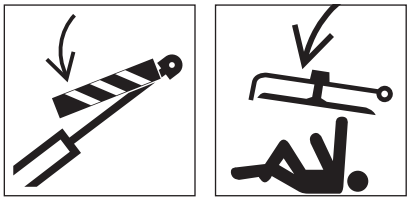
Revise los equipos de la cortadora de césped y el tractor

Antes de comenzar la jornada de trabajo, inspeccione la máquina y asegúrese de que todos los sistemas estén en buenas condiciones operacionales.

¡ADVERTENCIA! Evite posibles lesiones por aplastamiento producidas por equipos que caen. La falla del sistema hidráulico o de una parte podría causar la caída de equipos que no están apoyados. **No permanezca debajo de equipos elevados excepto que estén correctamente apoyados de acuerdo con el manual del operador.**

— Realice procedimientos de servicio diarios y periódicos según lo indicado por el fabricante del equipo.
— Verifique para detectar piezas faltantes, dañadas, rotas o flojas en el tractor y en la cortadora de césped. Repare o sustituya esas piezas.
— Verifique que los accesorios del tractor y la cortadora sean los correctos.
— Verifique que la clasificación nominal de velocidad de TDF del tractor y la cortadora sea la correcta.
— Verifique el estado de las hojas de la cortadora de césped. Sustituya las hojas que se encuentren gravemente gastadas, dobladas, agujereadas o marcadas; incluya los pernos y sujetadores de las hojas. Nunca enderece o suelde en las hojas.
— Asegúrese de que el escudo para objetos que son arrojados se encuentre correctamente instalado y en buen estado. Repárelo o sustitúyalo si está dañado o falta.





Preparación para una operación segura

— Verifique que todos los escudos y guardas estén en su lugar y que todos los equipos se encuentren en buenas condiciones de funcionamiento. Esto incluye la línea motriz de la TDF, la caja de engranajes y las guardas y escudos de los implementos que se usan para proteger al operador.
— Verifique que los dispositivos de bloqueo del extremo en horquilla de la línea motriz estén correctamente enclavados.
— Verifique en busca de sistemas hidráulicos dañados o con fugas en el tractor o la cortadora. Repare o ajuste según sea necesario.

¡ADVERTENCIA! El fluido hidráulico bajo presión puede penetrar la piel o los ojos y causar lesiones graves, ceguera o la muerte. Las fugas de fluido bajo presión pueden no ser visibles. **Utilice un cartón o una madera para buscar fugas, no la mano. Use protección ocular.** Si el fluido se inyecta en la piel, debe ser extraído dentro de las próximas pocas horas por personal médico familiarizado con este tipo de lesión.

— Mantenga la superficie de la plataforma del operador limpia y libre de grasa, aceite, suciedad, nieve o hielo. Los peldaños y asideros deben estar limpios y funcionar correctamente.
— Asegúrese de que las luces de trabajo se mantengan limpias (si están instaladas). Verifique que todas las luces funcionen correctamente.
— Asegúrese de que el letrero de vehículo de movimiento lento, los y las luces de advertencia estén en buenas condiciones y puedan verse claramente.
— Asegúrese de que todas las herramientas y objetos sueltos se retiren o se sujeten con seguridad mientras se opera la máquina.
— Verifique que todos los letreros de seguridad se vean con claridad. Sustituya los letreros dañados.

Preparación para una operación segura

Familiarícese con la zona de trabajo

Antes de hacer funcionar la cortadora de césped, inspeccione cuidadosamente la zona de trabajo. Recorra a pie alrededor de la zona e inspeccione las superficies sobre las cuales se desplazará cuando utilice la cortadora.

Recorra a pie alrededor del lugar de trabajo

Localice y evite:

- Agujeros
- Desmoronamientos
- Obstáculos (tocones)
- Excavaciones
- Agua estancada
- Lodo profundo
- Puntos mojados
- Suelo blando
- Puntos irregulares
- Líneas y aparatos eléctricos
- Otros servicios públicos
- Cualquier condición que podría causar una colisión, pérdida de control o vuelco
- Pendientes empinadas

Busque residuos y obstáculos recorriendo a pie la zona antes de cortar. Los objetos como alambre, cable, rocas, neumáticos y metales que podrían dañar o ser arrojados por la cortadora de césped deben retirarse o marcarse claramente y evitarse.

Corrija las condiciones no seguras. No opere en áreas con problemas donde no se puedan retirar o marcar los residuos y los obstáculos.

Analice la zona de corte para determinar:

- El procedimiento de corte más eficiente.
- La altura del material que debe cortarse.
- Las condiciones operativas del terreno.
- Cómo usar mejor el patrón de corte en sentido de avance.
- Las posibilidades de que personas ajenas o que pasan circunstancialmente queden expuestas a objetos que se arrojan.

Retire o marque los residuos y obstáculos

Tenga cuidado con otras personas

Antes de poner en marcha los equipos:

- Recorra a pie alrededor de los equipos.
- Verifique en busca de personas debajo o cerca de los equipos.
- Retire a todas las personas de esas zonas.
- Haga sonar una advertencia.

Preparación para una operación segura

Ascienda y descienda del tractor correctamente

Siempre use contacto de tres puntos al ascender o descender del tractor o de la cortadora de césped. Enfrente la máquina al ingresar o salir de ella. Un contacto de tres puntos significa que tres de los cuatro miembros (brazos y piernas) están en contacto con la máquina en todo momento durante el ascenso y descenso.

Antes de ascender:

- Límpiese el calzado y las manos. Limpie la nieve, el hielo, el lodo o el aceite de los peldaños y asideros.

Durante el ascenso y el descenso:

- Use los asideros y los estribos.
- Nunca se aferre al volante o a los controles como asideros.
- Nunca ascienda o descienda de un tractor en movimiento.
- Nunca ascienda o descienda transportando herramientas u objetos que impidan el contacto de tres puntos. Deje en el piso las piezas o las herramientas. Manteniendo el contacto correcto, suba y, después, recoja el objeto.

Utilice contacto de tres puntos

Limpie las superficies resbaladizas

Preparación para una operación segura

Prueba de seguridad de los controles del tractor y de la cortadora de césped

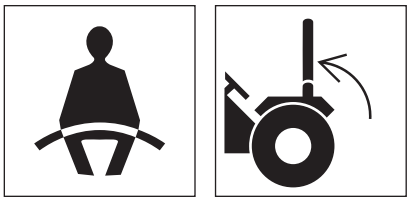
Arranque el tractor siguiendo los procedimientos específicos del manual del operador del fabricante. Estos procedimientos normalmente incluyen:

— Colóquese y ajústese el cinturón de seguridad en el tractor equipado con ROPS.
— Verifique que el freno de estacionamiento esté aplicado.
— Verifique que la TDF esté desenganchada.
— Verifique que todos los controles estén en la posición de estacionamiento.
— Advierta a otras personas en la zona antes de arrancar el tractor.
— Arranque el tractor siguiendo los procedimientos de arranque que recomienda el fabricante del tractor.

¡ADVERTENCIA! Evite lesiones graves o muertes producidas por el movimiento inesperado de la máquina. **Arranque el motor únicamente desde el puesto del operador. Nunca intente arrancar el motor haciendo un corto entre los bornes del arranque o tomando la llave desde el suelo o desde afuera de la cabina.**

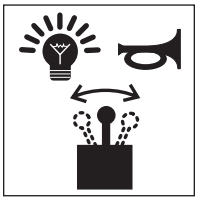
Después del arranque:

— Verifique que todos los instrumentos, indicadores y luces indicadoras funcionen normalmente.
— Verifique que todos los controles, la dirección y los frenos del tractor funcionen correctamente.



Use el ROPS y el cinturón de seguridad

Arranque únicamente desde el asiento del operador



Revise los instrumentos y controles

— Eleve y descienda la cortadora de césped en busca de problemas en el descenso total o el enganche de la línea motriz.
— Verifique los equipos en busca de vibraciones excesivas y ruidos anormales.

Preparación para una operación segura

— Use las prácticas correctas de apagado de los equipos antes de inspeccionar equipos. Espere hasta que todo movimiento de los equipos se haya detenido antes de descender del tractor o la cortadora de césped.
— No haga funcionar la cortadora si el tractor y la cortadora de césped no funcionan correctamente. Coloque una etiqueta que indique “No poner en funcionamiento” en la máquina, retire la llave y no haga funcionar la cortadora hasta que el problema se haya corregido.

Sistema de toma de fuerza (TDF)

Asegúrese de hacer funcionar el tractor a la velocidad de TDF indicada para la cortadora.

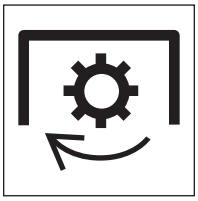
Al hacer funcionar tractores con sistemas de TDF impulsados por transmisión, una cortadora giratoria tiene un significativo efecto de rueda volante. La cortadora puede seguir propulsando un tractor con un sistema de TDF impulsado por transmisión.

El tractor debe estar equipado y funcionar como sigue:

— Instale una línea motriz equipada con un embrague de sobrecarga.
— Prevea suficiente espacio y tiempo para maniobrar anticipando los giros, las paradas y las reducciones de velocidad.

No descienda hasta que el movimiento de los equipos se haya detenido

Use una etiqueta que indique “No poner en funcionamiento”



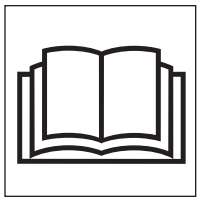
Use la velocidad de la TDF

Preparación para una operación segura

Enganche de la cortadora de césped al tractor

Cortadoras montadas en enganche de tres puntos:

— Consulte los manuales de los fabricantes de la cortadora y del tractor.
— Coloque la palanca selectora de elevación de potencia hidráulica del tractor en la posición descendida para evitar movimientos imprevistos.
— Explique los procedimientos de enganche a los operadores que no puedan leerlos.
— Pueden requerirse pesos en el extremo delantero para mantener el control de la dirección y la estabilidad del extremo delantero. Consulte los manuales del operador de los fabricantes.
— Al hacer retroceder el tractor hasta la cortadora de césped, NUNCA permita que haya personas entre tractor y la cortadora.
— Instale la cortadora en los eslabones de tres puntos del tractor y asegúrela en su lugar con pasadores.
— Instale con seguridad la línea motriz a la TDF del tractor. Descienda el escudo principal hasta su lugar si es móvil. Empuje y tire de la línea motriz para asegurarse de que esté trabada en el vástago de la TDF.



Lea y asegúrese de comprender los manuales antes de comenzar la operación

Mantenga una distribución correcta del peso

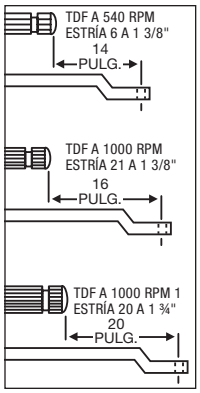
No permita que haya nadie entre el tractor y la cortadora de césped

Evite quedar enredado, use guardas y escudos

Preparación para una operación segura

Cortadoras montadas en enganche tipo de tiro:

— Consulte los manuales de los fabricantes de la cortadora y del tractor.
— Retire el acople rápido del enganche de tres puntos si está instalado.
— Instálelo únicamente al enganche de la barra de tiro.
— Ajuste la longitud de la barra de tiro del tractor para el funcionamiento de la TDF a 540 ó 1000 rpm.
— Al hacer retroceder el tractor hasta la cortadora de césped, NUNCA permita que haya personas entre tractor y la cortadora.
— Instale correctamente la cadena de remolque de seguridad de la cortadora en el tractor.
— Instale con seguridad la línea motriz a la TDF del tractor. Empuje y tire de la línea motriz para asegurarse de que esté trabada en la TDF. Descienda el escudo principal a su lugar.
— Conecte las mangueras hidráulicas de la cortadora de césped en el tractor.
— Asegúrese de que los laterales o las plataformas elevadas de la cortadora estén sostenidas por los cilindros antes de retirar las trabas de transporte. Nunca haga fuerza para soltar las trabas de transporte o de los laterales. Los laterales o la plataforma podrían caerse y aplastarlo.



Ajuste de la barra de tiro del tractor

Confirme que los laterales estén apoyados antes de soltar las trabas

Evite quedar enredado, use guardas y escudos

Arranque con seguridad

Cómo realizar un arranque correcto

Corte la hierba únicamente con luz diurna o en condiciones de buena luz artificial.

Evite lesiones graves o muerte producidas por objetos arrojados por la cortadora o por el contacto con las hojas:
— Mantenga los escudos de las cadenas, los escudos deflectores flexibles o sólidos y las rampas de descarga en su lugar y en buen estado de reparación.
— Mantenga a las personas ajenas a 300 pies (92 m) de la operación de corte.
— Nunca dirija la descarga de la cortadora hacia una persona.
— Mantenga las manos, los pies y otras partes del cuerpo alejadas de las piezas giratorias, las hojas y las aberturas de descarga.
— No haga funcionar la cortadora de césped en la posición de transporte.

No se acerque a una cortadora hasta que todo movimiento se haya detenido.

Enganche de la transmisión de RDF de la cortadora de césped:
— Eleve la cortadora hasta la altura de corte máxima.
— Enganche la TDF a baja velocidad del motor.
— Aumente la velocidad del motor hasta llegar a la velocidad nominal de la TDF.
— Descienda la cortadora hasta la altura de corte deseada.
— Detenga y apague de inmediato si la cortadora golpea contra una obstrucción.
— Inspeccione y repare cualquier daño de la cortadora antes de reanudar el corte.
— No haga funcionar una cortadora que vibra en exceso o produce ruidos anormales.

Hojas giratorias – Manténgase

No ponga en funcionamiento una cortadora de césped dañada

Objetos arrojados por la cortadora de césped

Dependiendo del propósito previsto, las cortadoras están diseñadas para cortar hierba, maleza, broza y cultivos. Las hojas de la cortadora están diseñadas y probadas para uso intensivo. Las hojas de la cortadora, sin embargo, no están diseñadas para entrar en contacto con objetos sólidos como rocas, cemento o metales. Un impacto de este tipo puede arrojar objetos rotos hasta 300 pies (92 m) de distancia. Nunca debe haber personas ajenas a menos de 300 pies (92 m) de una cortadora giratoria en funcionamiento o a menos de 100 pies (30 m) de una cortadora de disco correctamente equipada.

Operación con seguridad

Los escudos de la cortadora están diseñados para reducir el riesgo de objetos arrojados y se deben mantener correctamente y en su lugar durante las operaciones de corte.

El riesgo de lesiones graves o muerte puede reducirse significativamente si se siguen estas reglas. **Si no se siguen todas estas reglas de seguridad, la operación de corte debe detenerse en caso de que alguna persona ingrese dentro del límite de seguridad correspondiente a cada tipo de cortadora.**

Primero — Inspeccione la zona antes de cortar y retire las piedras, ramas, alambres, cables, metales, vidrios y otros objetos sólidos antes de hacer funcionar la máquina. Los objetos que no puedan retirarse deben marcarse con claridad y ser evitados con cuidado por el operador.

En áreas sin cultivos con hierba y maleza de altura suficiente como para ocultar objetos que podrían ser golpeados por las hojas, inspeccione la zona y retire o marque los residuos u obstáculos grandes.

Siga todas las reglas de seguridad

Realice el corte de la zona a una altura intermedia. Inspeccione la zona atentamente y retire o marque cualquier residuo u obstáculo restante. Corte nuevamente a la altura final deseada.

Segundo — Los escudos para objetos arrojados por la cortadora deben usarse cuando se opera cerca de caminos, parques, zonas pobladas u otras zonas donde objetos arrojados podrían lesionar a personas ajenas o dañar la propiedad. Siga el manual del operador del fabricante.

Tercero — Cruce en sentido diagonal cuando realiza el corte a través de zanjas, depresiones marcadas y hundimientos. Eleve la cortadora para evitar que las hojas de la cortadora golpeen el suelo.

Operación con seguridad

Objetos arrojados por la cortadora de césped (continuación)

Cortadoras de disco — Cuando se usa una cortadora de disco, es importante conocer la zona donde se va a cortar. Si el operador ha realizado cortes en el terreno antes y está familiarizado con todos los obstáculos que puede haber, es suficiente observar delante de la trayectoria de la cortadora para detectar cualquier objeto adicional que pueda haber ingresado en el terreno. Esté preparado para detenerse o evitar objetos que podrían ser peligrosos si son arrojados por la cortadora. Si piensa cortar en un terreno que no conoce bien y se encuentra junto a un camino transitado o puede haber personas a menos de 100 pies (30 m) de la cortadora de césped, debe inspeccionar y limpiar o marcar el terreno.

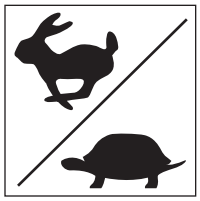
Cómo cortar en retroceso

No corte mientras se desplaza en retroceso. Es más probable que se arrojen objetos y que éstos puedan llegar más lejos.

No corte en retroceso

Apague la TDF, espere que las hojas dejen de girar, eleve la cortadora y, después, retroceda.

Corte desplazándose en sentido de avance.



Use la velocidad de desplazamiento correcta

Velocidad de desplazamiento durante el corte

La velocidad de desplazamiento correcta depende de las condiciones del terreno y del tipo de hierba, la densidad y la altura que debe cortarse:

— El rango normal de velocidad de desplazamiento es de 2 a 5 mph (3.2 a 8 km/h).
— Use una velocidad de desplazamiento menor para cortar hierbas altas y densas.
— Use una velocidad de desplazamiento mayor para cortar hierba delgada a altura media y con condiciones de terreno sin dificultades.
— Use una velocidad de desplazamiento menor par acortar en terreno irregular, con pendientes o no muy conocido.

Las cortadoras de disco están diseñadas para usar velocidades de desplazamiento mayores cuando funcionan en terrenos despejados de residuos y peligros superficiales.

Operación con seguridad

Corte de hierba extremadamente alta

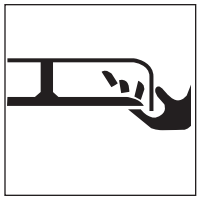
Puede ser necesario cortar dos veces la hierba extremadamente alta que no sea cultivo. (Consulte la página 13, **Objetos arrojados por la cortadora de césped**.)

Primera pasada de corte:

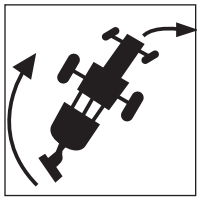
— Apague la cortadora y el tractor usando la práctica correcta de apagado de equipos antes de descender del tractor. (Consulte la página 18, **Prácticas correctas de apagado de los equipos**.)
— Inspeccione la zona y retire o marque cualquier residuo u obstáculo.
— Corte la hierba a mayor altura (10 a 15 pulg. [25 a 38 cm]) para evitar los objetos ocultos.

Segunda pasada de corte:

— Apague la cortadora y el tractor usando la práctica correcta de apagado de equipos antes de descender del tractor.
— Inspeccione la zona y retire o marque cualquier residuo u obstáculo.
— Corte la hierba a la altura deseada y, de ser posible, a 90 grados con respecto a la primera pasada de corte.



Detenga la hoja antes de desatascar



Proporcione el espacio libre adecuado para la oscilación de la cortadora de césped

Preste atención a los espacios libres de los equipos

Las cortadoras con enganche de tres puntos y montaje lateral tienen un arco de giro mayor que las tipo de tiro. Deje el espacio libre suficiente para la oscilación de la cortadora cuando gira.

No permita que haya personas ajenas cerca del tractor y la cortadora de césped cuando mueve o transporta el tractor y la cortadora.

Operación con seguridad

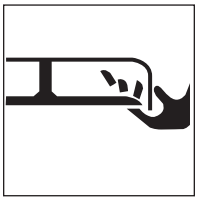
Prácticas de seguridad para la cortadora de césped de montaje inferior

Cuando se traslada con una cortadora de césped de montaje inferior:

— Mantenga la rampa de descarga extraíble en su lugar y por encima de la abertura de descarga.
— Nunca se pare sobre la carcasa de una cortadora de césped cuando el motor del tractor está en funcionamiento.
— Distribuya los recortes de hierba con la rampa de descarga orientada hacia la zona donde se cortó.
— Antes de limpiar una cortadora o una rampa de descarga atascada, apague la máquina usando la práctica correcta para apagado del equipo. (Consulte la página 18, **Prácticas correctas de apagado de los equipos**.)

Nunca se pare sobre la cortadora de césped – Manténgase alejado

Mantenga la rampa en su lugar



Detenga la hoja antes de desatascar

Operación con seguridad

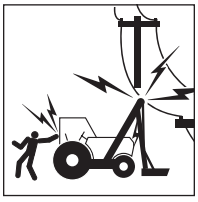
Cortadora de césped con lateral o aguilón Peligros y riesgos de obstrucciones elevadas

Verifique en busca de obstrucciones elevadas con las cortadoras que tienen el lateral o el aguilón elevado, para evitar lesiones graves o la muerte por contacto con:

— Líneas y aparatos eléctricos.
— Ramas bajas de los árboles.
— Otras obstrucciones elevadas.
— Mantenga las distancias especificadas con respecto a los cables y los aparatos eléctricos. Nunca se acerque a cables o aparatos eléctricos energizados con ninguna parte de la máquina, salvo que se hayan tomado todas las precauciones de seguridad locales, estatales/provinciales y federales (OSHA) necesarias. Use extrema precaución.

¡PELIGRO! Evite la electrocución o lesiones graves por contacto o un espacio libre inadecuado con respecto a líneas o aparatos eléctricos energizados. **No permita que la máquina o el accesorio se acerque o entre en contacto con una línea de electricidad. No se acerque ni toque una máquina que esté en contacto con una línea de electricidad.**

No se acerque a líneas de electricidad energizadas



Manténgase alejado de los equipos energizados

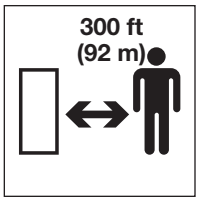
Operación con seguridad

Prácticas de seguridad para cortadoras de césped con laterales y montaje lateral

Las posiciones elevadas de los laterales reducen la protección de los escudos y aumentan los riesgos de objetos arrojados y contacto con las hojas.

Evite la posibilidad de lesiones graves o muerte por objetos arrojados o contacto con las hojas causados por la elevación y el descenso de los laterales durante las operaciones de corte:

— No realice cortes con personas ajenas presentes a menos de 300 pies (92 m) de la cortadora de césped.
— Asegúrese de que no haya personas cerca de la cortadora mientras se elevan o descienden los laterales.
— Apague la TDF y espere hasta que todos los elementos giratorios se hayan detenido antes de elevar la plataforma o la sección lateral de la cortadora.
— Únicamente eleve el lateral para quitar objetos de la trayectoria de corte o para acompañar una pendiente del terreno.
— Descienda hasta el suelo el lateral elevado una vez que se eliminó el objeto o se superó la pendiente.
— Detenga el trabajo de corte si alguna persona se acerca a menos de 300 pies (92 m) de la zona de corte.



Mantenga a las personas ajenas alejadas de la zona de corte

Evite golpear obstrucciones

Prácticas de seguridad para trabajos de corte en orillas de zanjas

Use extremo cuidado al realizar cortes en orillas de zanjas. Preste atención a escurrimientos, zonas erosionadas y obstrucciones para el corte a lo largo de las orillas de zanjas. Si se golpean obstrucciones con cortadoras de montaje lateral o con aguilón, el extremo delantero del tractor puede desviarse hacia la zanja.

Operación con seguridad

Los trabajos en orillas de zanjas con aguilón y lateral elevado pueden reducir la eficacia de la protección del operador de la cortadora que proporcionan los escudos para objetos arrojados.

Utilice cabinas cerradas con ROPS o cerramientos de protección

— Cuando realice estas operaciones, use cabinas cerradas con ROPS, cerramientos protectores especiales y otros escudos para el operador que ofrece el fabricante.
— Inspeccione la zona de corte y retire o marque todos los objetos extraños y los residuos que deberá esquivar la cortadora.

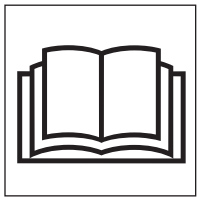
Prácticas de seguridad para trabajos de corte en terrenos desparejos

Las pendientes y los terrenos desparejos reducen la estabilidad del tractor y de la cortadora.

Como en todas las condiciones de corte, use tractores equipados con ROPS y cinturón de seguridad. **Asegúrese de que el ROPS está elevado y trabado en su lugar y use siempre el cinturón de seguridad.**

Prevenga los vuelcos del tractor y de la cortadora de césped y mantenga controlada la estabilidad de los equipos:

— Repase los manuales del operador del tractor y de la cortadora para ver las prácticas de seguridad para operaciones en pendientes y terrenos desparejos. Explique las prácticas a los operadores que no puedan leerlas.
— Evite trabajar en pendientes extremadamente empinadas.



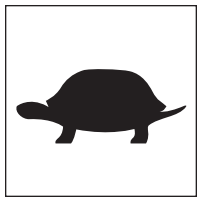
Lea y asegúrese de comprender los manuales antes de comenzar la operación

Use el ROPS y el cinturón de seguridad

Operación con seguridad

Prácticas de seguridad para trabajos de corte en terrenos desparejos (continuación)

— Use extremo cuidado para mantener el control de los equipos cuando trabaja en estas condiciones.
— Aumente la estabilidad del tractor agregando pesos o lastre en las ruedas y aumentando al máximo la separación entre las ruedas. Consulte las recomendaciones en el manual del operador.
— Mantenga la velocidad de desplazamiento en el mínimo.
— Realice giros amplios y graduales.
— Evite los arranques, las paradas y los giros bruscos cuando trabaje en subidas o bajadas de pendientes o sobre ellas.
— **No** levante del suelo las cortadoras de montaje trasero o de montaje lateral ni los laterales de la cortadora durante estas operaciones.
— Manténganse alerta en busca de agujeros, baches, pozos, tocones u otras obstrucciones que podrían hacer volcar la máquina.
— Evite las condiciones de suelo resbaladizo que podrían causar la pérdida de control y el vuelco del tractor y la cortadora.
— Evite bajar completamente y golpear el suelo cuando cruza en sentido diagonal depresiones marcadas y hundimientos.



Mantenga el control, desplácese

Agregue lastre, ensanche la separación entre las ruedas

Evite los pozos, baches y agujeros

Use extremo cuidado al mantener la estabilidad de los equipos durante todos los trabajos de corte en terrenos desparejos y pendientes. Usted es quien juzga en última instancia si en cualquier pendiente se puede trabajar con seguridad.

Operación con seguridad

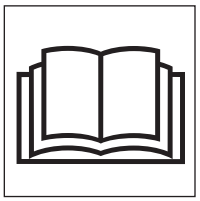
Prácticas de seguridad para el transporte en caminos

Antes de operar en la vía pública:
— Consulte los manuales del operador de los fabricantes de la cortadora y del tractor para ver instrucciones.
— Explique las instrucciones a los usuarios u operadores que no puedan leerlas.
— Verifique las ordenanzas locales sobre marcas, luces, balizas, etc. requeridas en los equipos durante el desplazamiento por la vía pública. Se requieren luces en las cortadoras que obstaculizan la visibilidad de las luces traseras y/o las luces de advertencia del tractor.
— Cuando transporte la cortadora de césped en un remolque, siga las instrucciones detalladas del fabricante para la carga, el amarre y la descarga de la cortadora.

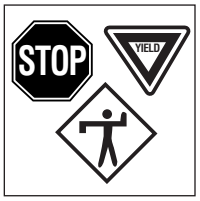
Antes de transportar en la vía pública:
— Desconecte la alimentación de la TDF a la cortadora.
— Eleve la cortadora a la posición de transporte y aplique la traba para transporte.
— Trabe los laterales de la cortadora de césped en la posición de transporte con dispositivos de bloqueo aprobados.
— Instale una cadena de seguridad para remolque entre la cortadora tipo de tiro y el tractor.
— Asegúrese de que las luces, las luces de advertencia y los reflectores están en su lugar y son visibles.
— Verifique que el emblema de vehículo de movimiento le resulte visible a cualquier vehículo que se aproxime por atrás.

Durante el transporte en la vía pública:
— Obedezca todas las ordenanzas de tránsito locales.
— Acérquese a las intersecciones con precaución.
— Observe los letreros de velocidad y control del tránsito.
— Evite las paradas de emergencia y los giros cerrados.

Sea un operador amable y apártese periódicamente para dejar pasar el tránsito.



Lea y asegúrese de comprender los manuales antes de comenzar la operación



Obedezca las ordenanzas de tránsito

Estacionamiento seguro

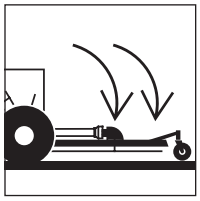
Prácticas de seguridad para el estacionamiento

— Use las zonas designadas o alejadas del tránsito.
— Use lugares con suelo firme y nivelado.
— Aplique el freno de estacionamiento.
— Descienda el equipo de la cortadora de césped hasta el suelo.

Apague la cortadora y el tractor usando la práctica correcta de apagado de equipos antes de descender del tractor. (Consulte la página 18, **Prácticas correctas de apagado de los equipos**.)

Lugares de estacionamiento con suelo en pendiente:
— Ubique los equipos transversalmente con respecto a la pendiente.
— Aplique los frenos de estacionamiento.
— Descienda el equipo de la cortadora de césped hasta el suelo.
— Bloquee las ruedas del tractor.

Aplique el freno de estacionamiento



Descienda los equipos elevados hasta el suelo

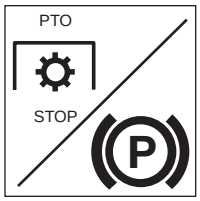
Antes de estacionar temporalmente y dejar equipos deshabilitados cerca de zonas con tránsito:
— Retire los equipos de la vía pública.
— Instale banderas de advertencia.
— Use las balizas de advertencia del tractor.

Apagado con seguridad

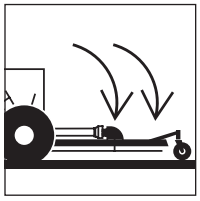
Prácticas correctas de apagado de los equipos

Transforme el apagado correcto de los equipos en un hábito.

El apagado correcto de un tractor y una cortadora de césped puede ayudar a evitar accidentes cuando la cortadora está sin vigilancia. Apague la cortadora siguiendo los procedimientos específicos del manual del operador del fabricante. Estos procedimientos normalmente incluirán:
— Reduzca la velocidad del motor.
— Desenganche el embrague de la TDF y la transmisión.
— Haga funcionar el motor en ralentí para que se enfríe gradualmente.
— Coloque todos los controles en la posición de estacionamiento.
— Aplique el freno de estacionamiento.
— Descienda la cortadora de césped hasta el suelo.
— Descienda los laterales de las cortadoras con laterales hasta el suelo.
— Apague el motor, trabe la ignición y retire la llave de la máquina; llévela con usted.
— Espere hasta que todas las piezas móviles se hayan detenido antes de descender.
— Libere la presión hidráulica moviendo los controles hidráulicos varias veces en todas las direcciones.
— Trabe las cubiertas y los cerramientos antivandalismo, si están instalados, cuando los equipos están sin vigilancia.
— Descienda con cuidado manteniendo contacto de tres puntos.

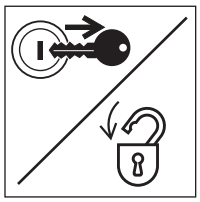


Desenganche la TDF, aplique el freno



Descienda los equipos elevados hasta el suelo

Espere hasta que las piezas giratorias se detengan



Retire la llave, trabe la ignición, llévese la llave

Apagado con seguridad

Descenso correcto

— Nunca descienda de equipos en movimiento.
— Nunca baje de una máquina saltando.
— Descienda con cuidado.
— Verifique que no haya peldaños resbaladizos.
— Mantenga los pies y las manos lejos de los controles.
— Use los asideros y los peldaños durante el descenso.
— Enfrente la máquina y use contacto de tres puntos (2 manos y 1 pie o 2 pies y 1 mano).

Espere hasta que las piezas móviles se detengan

Use contacto de tres puntos; enfrente a la máquina

Realización de mantenimiento con seguridad

Mantenimiento de los equipos

Realice el mantenimiento de los equipos

Asegúrese de mantener los equipos de acuerdo con las instrucciones del fabricante. Verifique con regularidad el funcionamiento de los dispositivos de protección y de seguridad.

No realice ningún trabajo en un tractor o en una cortadora de césped si no está autorizado y cualificado para hacerlo.

Si ha sido autorizado para realizar mantenimiento, **lea los manuales del operador y de servicios**. Estudie las instrucciones; verifique las tablas de lubricación; examine todos los mensajes de instrucciones que haya sobre la máquina. El mantenimiento puede ser peligroso si no se realiza correctamente. Asegúrese de tener las habilidades necesarias, la información y las herramientas y equipos correctos para realizar el trabajo.

¡ADVERTENCIA! No modifique equipos ni agregue componentes no aprobados por el fabricante. Use piezas, lubricantes y técnicas de servicio recomendadas por el fabricante.

Piezas de la cortadora de césped y seguridad personal

Los fabricantes de cortadoras de césped usan sujetadores y específicos y piezas especialmente diseñadas para cumplir con los requisitos de las operaciones de las cortadoras. Las piezas críticas (pernos autobloqueantes de las hojas, hojas, pasadores, escudos y otros componentes especiales) tienen requisitos específicos de resistencia, diseño y ajuste para la marca y el modelo de cortadora que usted está usando.

Evite posibles lesiones graves o la muerte por el uso de piezas o modificaciones no aprobadas:
— No sustituya con tornillería común los pernos de las hojas u otros componentes de piezas especiales originales del fabricante.
— No sustituya hojas, pasadores, escudos u otras piezas críticas.
— No use pernos de mayor resistencia para reemplazar los pernos de seguridad originales del fabricante.

Realización de mantenimiento con seguridad

Preparación personal

Use la ropa de protección personal y los equipos de protección personal (PPE) que se le proporcionen o que requieran las condiciones del trabajo. **SIEMPRE** debe usar gafas de seguridad con escudos laterales.

Puede necesitar también:
— Casco
— Calzado de seguridad
— Anteojos de seguridad, antiparras o protección facial
— Delantal y guantes
— Protección para oídos
— Casco o antiparras para soldar
— Respirador o máscara con filtro

Use la ropa necesaria; no corra ningún riesgo.

Mantenga las manos (y la ropa)alejadas de todas las piezas móviles. No use cordones sueltos, mangas flojas, anillos, relojes o cabello largo.

¡ADVERTENCIA! Evite lesiones graves o muerte por enredos. **No use ropa floja ni accesorios. Manténgase alejado de todos los componentes giratorios cuando el motor está en funcionamiento.** El contacto, el enrollado o el enredo con piezas giratorias o móviles podrían resultar en lesiones graves o la muerte.

Evite las piezas giratorias

Evite puntos donde pueda quedar atrapado

Realización de mantenimiento con seguridad

Use un delantal de caucho y guantes de caucho cuando trabaja con sustancias corrosivas. Use guantes y calzado de seguridad cuando manipula bloques de madera o metales con bordes agudos.

Use siempre anteojos de seguridad, antiparras o protección facial. Proporcionan protección ocular para fluidos bajo presión, mientras se esmerila y se realizan servicios a las baterías. También es necesaria protección contra residuos, líquidos y material suelto producido por el equipo, las herramientas y el aire/agua presurizada.

Use protección facial y siga las instrucciones del fabricante cuando desarma componentes cargados a resorte o cuando trabaja con ácidos de batería. Use un casco o antiparras para soldar con filtro esfumado cuando suelda o corta con soplete.

No arene, esmerile, corte con soplete o suelde sin un respirador aprobado por NIOSH o una ventilación adecuada. Si se requiere soldar en esta máquina, consulte los manuales del operador o de servicios del fabricante o consulte al concesionario de los equipos para obtener los procedimientos correctos.

Mantenga los bolsillos sin objetos que podrían salirse y caer dentro de la maquinaria.

Limpie las superficies resbaladizas

Ventile la zona de trabajo

Maneje las herramientas y las piezas pesadas con sensatez con respecto a usted mismo y a otras personas. Deposite los elementos, no los deje caer.

Preparación de la zona de trabajo

— Ubique la cortadora de césped en una zona nivelada fuera del paso de otros equipos en funcionamiento.
— Asegúrese de que haya luz, ventilación y espacio libre adecuados.
— Quite el aceite, la grasa o el agua para eliminar toda superficie resbaladiza.
— Limpie alrededor de la zona donde se realizarán servicios para minimizar la contaminación.

Realización de mantenimiento con seguridad

Preparación de la máquina

Deben controlarse o reducirse las fuentes de energía almacenada (eléctricas, mecánicas, hidráulicas, neumáticas, químicas, térmicas, etc.) al mínimo practicable antes de realizar cualquier procedimiento de mantenimiento, reparación o servicio.

Prácticas de seguridad para prevenir posibles lesiones por fuentes que liberan energía:

— Desenganche la TDF antes de apagar el motor.
— Coloque los controles en la posición de estacionamiento o punto muerto antes de apagar el motor.
— Aplique el freno de estacionamiento o bloquee las ruedas.
— Espere hasta que todas las piezas móviles se detengan.
— Descienda la cortadora de césped hasta el suelo.
— Descienda los laterales de las cortadoras con laterales hasta el suelo.
— Apague el motor del tractor.
— Libere la presión del sistema hidráulico moviendo los controles varias veces en todas las direcciones.
— Trabe la ignición, retire la llave y llévesela.

Prepare los sistemas de la máquina para realizarles servicios

— Escuche y observe en busca de evidencias que indiquen piezas en movimiento antes de descender.
— Apoye o bloquee con seguridad la cortadora de césped antes de trabajar debajo de ella o de otros componentes elevados.
— Apoye, bloquee o trabe con seguridad los laterales de la cortadora con dispositivos de traba aprobados antes de trabajar cerca o debajo de una cortadora con laterales.
— Alivie la presión antes de desconectar o desarmar un sistema presurizado.
— Bloquee o alivie la presión de los resortes antes de desarmar un mecanismo cargado a resorte.
— Apoye o bloquee con seguridad cualquier componente elevado de la máquina antes de trabajar en él.
— Evite las llamas, las chispas y no fume cerca de combustibles, fluido hidráulico u otro material inflamable como los residuos de los cortes.

Realización de mantenimiento con seguridad

Fije una etiqueta con la advertencia “NO PONER EN FUNCIONAMIENTO” en todas las palancas de control y retire la llave de contacto si la cortadora de césped no debe ser utilizada. Llévese la llave.

Instale dispositivos de apoyo aprobados cuando trabaja debajo o cerca de equipos elevados.

¡ADVERTENCIA! Las cortadoras de césped u otros equipos elevados no apoyados pueden caerse de manera imprevista. **Nunca se introduzca debajo de equipos elevados si no están apoyados en dispositivos de apoyo aprobados.** La caída de equipos podría resultar en una lesión grave o la muerte por aplastamiento.

Retire sólo las guardas o cubiertas que permiten acceder a la zona donde se realizarán servicios. Vuelva a colocar todas las guardas y cubiertas cuando el trabajo esté terminado.

Use una “etiqueta que indique No poner en funcionamiento”

Utilice dispositivos de apoyo aprobados

Vuelva a colocar todas las guardas

Realización de mantenimiento con seguridad

Use ventilación adecuada

Si es necesario hacer funcionar un motor en una zona cerrada, elimine del área las emanaciones de escape con una extensión del caño de escape. Si no tiene esa extensión, asegúrese de abrir las puertas y dejar entrar aire del exterior.

¡ADVERTENCIA! Evite posibles lesiones. **Nunca trabaje en la maquinaria con el motor en funcionamiento salvo que así lo indiquen los manuales del fabricante para un servicio en particular.**

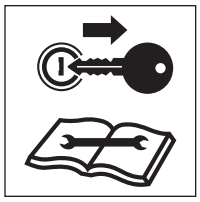
¡ADVERTENCIA! Nunca haga funcionar ningún tipo de motor sin la ventilación adecuada: LAS EMANACIONES DEL ESCAPE PUEDEN SER MORTALES.

Use gatos y malacates con cuidado

Los soportes o bloques de seguridad deben ubicarse en una parte rígida de la cortadora. No ubique soportes debajo de ejes o apoyos de ruedas que puedan girar.

Si debe trabajar debajo de equipos elevados, siempre use bloques de madera (**no de concreto**), soportes de gato u otros soportes rígidos y estables. Cuando use gatos o malacates, siempre asegúrese de que están correctamente apoyados.

¡ADVERTENCIA! Evite posibles lesiones por aplastamiento. **Nunca use bloques de concreto para apoyo.** Pueden colapsar bajo cargas incluso livianas.



Retire la llave y lea el manual de mantenimiento

Ventile la zona de trabajo

Use un apoyo adecuado para los equipos elevados

Asegúrese de que los malacates o gatos que usa estén en buenas condiciones. Nunca use gatos con piezas rajadas, dobladas o retorcidas. Nunca use cables pelados, retorcidos o pellizcados. Nunca use ganchos doblados o deformados.

Realización de mantenimiento con seguridad

Prácticas de seguridad para tareas de mantenimiento comunes

Riesgos del combustible

¡ADVERTENCIA! Siempre use recipientes y/o equipos de distribución de combustible aprobados.

Los combustibles son inflamables; por eso, debe cumplir estas prácticas con el fin de reducir la posibilidad de un accidente grave.

- — Apague el motor y la ignición mientras carga combustible.
- — Siempre conecte a tierra la boquilla de combustible contra el cuello de llenado del depósito para evitar chispas.
- — Mantenga las chispas y llamas abiertas alejadas del combustible.
- — No fume mientras carga combustible o manipula recipientes con combustible.
- — No corte ni suelde en líneas, tanques o recipientes de combustible ni cerca de ellos.
- — No llene el depósito en exceso o derrame combustible. Limpie el combustible derramado de inmediato.

Riesgos del refrigerante de motor

Los sistemas de refrigeración con líquidos acumulan presión a medida que el motor se calienta; **tenga suma precaución antes** de retirar la tapa del radiador. Asegúrese de:

- — Detener el motor y esperar que el sistema se enfríe.
- — Usar ropa de protección y anteojos de seguridad.
- — Girar la tapa del radiador lentamente hasta el primer tope para permitir que la presión escape antes de retirar la tapa por completo.

No fumar; evitar las llamas abiertas

Retire la tapa del radiador lentamente

Realización de mantenimiento con seguridad

Riesgos del sistema hidráulico

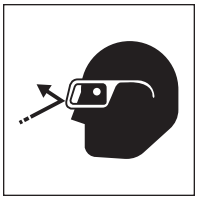
El sistema hidráulico se encuentra bajo presión siempre que el motor está funcionando; puede conservar presión incluso después de apagar el motor. Haga funcionar todos los controles hidráulicos incluyendo el control hidráulico auxiliar después de que el motor esté apagado. Alivie la presión atrapada en las líneas después de que los accesorios están apagados y apoyados en el suelo.

Durante la inspección del sistema hidráulico:
— Espere que el fluido se enfríe antes de desconectar las líneas. El fluido hidráulico caliente puede causar QUEMADURAS GRAVES.
— **No** use las manos para verificar la presencia de fugas. En cambio, use un cartón o papel para buscar fugas.
— Use protección ocular adecuada. El fluido hidráulico puede causar lesiones oculares permanentes.

¡ADVERTENCIA! El fluido hidráulico bajo presión pueden penetrar la piel o los ojos y causar lesiones graves, ceguera o la muerte. Las fugas de fluido bajo presión pueden no ser visibles. **Utilice un cartón o una madera para buscar fugas, no la mano. Use una protección facial o antiparras de seguridad para proteger los ojos.** Si el fluido se inyecta en la piel, debe ser extraído dentro de las próximas pocas horas por personal médico familiarizado con este tipo de lesión.

Cuando ventila o llena el sistema hidráulico, afloje la tapa de llenado con lentitud y retírela gradualmente.

Nunca restablezca una válvula de alivio del sistema hidráulico a una presión mayor que la recomendada por el fabricante.



Use protección ocular

El fluido a alta presión puede inyectarse en el cuerpo

Realización de mantenimiento con seguridad

Riesgos del sistema eléctrico

Antes de trabajar en el sistema eléctrico, desconecte los cables de la batería.
— Retire primero los cables negativos (-) de la batería.
— Al reconectar la batería, conecte los cables negativos (-) de la batería al final.

El líquido del interior de las baterías contiene ácido, que es un VENENO y puede causar QUEMADURAS QUÍMICAS GRAVES.

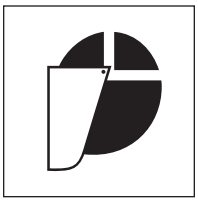
Evite lesiones

— Use una protección facial para evitar el contacto con los ojos.
— Use guantes y ropa resistentes a los productos químicos para mantener al electrolito alejado de la piel y la ropa común.

¡ADVERTENCIA! El contacto con el electrolito daña los ojos y la piel. **Siempre use una protección facial para evitar que el electrolito penetre en los ojos.** Si el electrolito entra en contacto con los ojos, enjuague de inmediato con agua limpia y busque atención médica.

Use guantes de caucho y ropa de protección para mantener el electrolito lejos de la piel. Si el electrolito entra en contacto con la piel o la ropa, lave de inmediato con agua limpia.

Si se ingiere, busque atención médica de inmediato. NUNCA proporcione líquidos que induzcan el vómito.



Use protección facial

Use indumentaria de protección

Realización de mantenimiento con seguridad

Evite explosiones

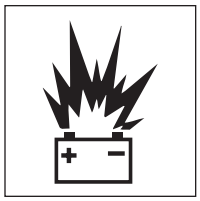
¡ADVERTENCIA! Evite posibles lesiones graves por explosiones. Las baterías de plomo-ácido producen gases sumamente explosivos, especialmente durante la carga. **Mantenga alejados los arcos, las chispas, las llamas y el tabaco encendido.**

— **No** fume cerca de las baterías.
— Mantenga los arcos, las chispas y llamas abiertas alejadas de las baterías.
— Proporcione ventilación adecuada.

Nunca revise la batería colocando un objeto metálico entre los bornes: la chispa resultante podría causar una explosión.

¡ADVERTENCIA! Evite posibles lesiones graves por explosiones de baterías. **No cargue baterías ni arranque con refuerzo el motor si la batería está congelada.** Caliente a 60 °F (15,5 °C) o la batería puede explotar y causar lesiones graves.

Reglas de seguridad durante el arranque con refuerzo de batería:
— Siga las instrucciones para el “arranque con refuerzo de batería” correcto como se especifica en el manual del fabricante.
— Asegúrese de que las máquinas no se estén tocando.
— Observe la polaridad de las baterías y conexiones.
— Realice la conexión final de cable al motor o al punto de tierra más alejado de la batería. Nunca realice la conexión final en el arrancador o la batería muerta: las chispas pueden encender gases explosivos presentes en la batería.
— Cuando desconecta cables después de un arranque con puente, retire los cables en el orden inverso al de la conexión (es decir, la conexión final primero).



Evite las chispas y las llamas abiertas cerca de las baterías

Para el arranque con refuerzo, observe la polaridad y realice la conexión final en el punto de descarga a tierra

Realización de mantenimiento con seguridad

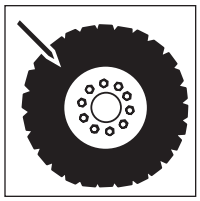
Mantenimiento de neumáticos y ruedas

Revise los neumáticos y las ruedas a diario porque la estabilidad del tractor y la cortadora de césped puede verse significativamente afectada por la presión de los neumáticos o daños en los neumáticos o en las ruedas.

Revise los neumáticos para verificar:
— La presión correcta.
— Cortes y protuberancias.
— Clavos u otras pinchaduras.
— Desgaste desparejo o excesivo.
— Estado de los vástagos y tapas de las válvulas.

Revise las ruedas para verificar:
— Daños en las llantas.
— Tuercas o pernos faltantes o flojos.
— Desalineación.

Todos los servicios de neumáticos deben ser realizados por un centro de servicios para neumáticos cualificado o por una persona de servicio autorizada debidamente capacitada en los procedimientos y el uso del equipo de seguridad destinado a los servicios de neumáticos.



Revise los neumáticos y las ruedas en busca de daños

Mantenga la presión correcta en los neumáticos

Realización de mantenimiento con seguridad

Mantenimiento de neumáticos y ruedas (continuación)

¡ADVERTENCIA! Los tipos de ruedas y neumáticos que generalmente se encuentran en estos equipos requieren cuidados especiales al realizar servicios para evitar lesiones graves o la muerte.

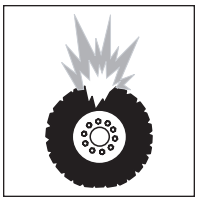
No infle los neumáticos por encima de la presión recomendada. Asegúrese de volver a colocar el lastre de los neumáticos si está instalado. Consulte las especificaciones del fabricante para ver los requisitos de lastre.

Mantenga las tuercas de las ruedas apretadas según las recomendaciones del fabricante.

Es normal que la presión de los neumáticos aumente durante el funcionamiento; NO se debe reducir.

Nunca vuelva a inflar un neumático que se ha desinflado mucho o por completo sin retirar el neumático de la rueda. Haga inspeccionar atentamente el neumático y la rueda para detectar daños antes de volverlos a armar.

Al agregar aire a un neumático, hágalo desde cierta distancia. Use una manguera larga con mandril de autofijación. Siempre párese detrás de la trocha cuando ajusta la presión de un neumático.



Evite la explosión de los neumáticos

No infle neumáticos con gases inflamables o con sistemas que usan un inyector de alcohol.

Nunca corte o suelde una rueda con un neumático inflado instalado en ella. Esto podría causar descompresión explosiva.

Verifique que el tamaño del neumático y la rueda coincidan correctamente.

Cuando reemplaza neumáticos, asegúrese de que sean de la clasificación adecuada especificada por el fabricante.

Los neumáticos no deben funcionar a velocidades más altas que las nominales. La mayoría de los neumáticos para agricultura están clasificados para una velocidad máxima de 20 mph (32 km/h).

Realización de mantenimiento con seguridad

Servicio y reparaciones completas antes de liberar la máquina

Apriete todos los pernos, accesorios y conexiones con las torsiones especificadas por el fabricante.

Instale todas las guardas, cubiertas y escudos después de realizar los servicios. Reemplace o repare los que estén dañados. Llene y recargue los sistemas a presión sólo con los fluidos aprobados o recomendados por el fabricante.

Arranque el motor y revise para detectar fugas. (Consulte la página 23, **Riesgos del sistema hidráulico**.) Haga funcionar todos los controles para asegurarse de que el tractor y la cortadora de césped funcionan correctamente. Pruebe la máquina si es necesario. Después de las pruebas, apague y verifique el trabajo realizado. ¿Falta algún pasador, arandela, tuerca de seguridad, etc.? Vuelva a revisar todos los niveles de fluidos antes de liberar la máquina para el funcionamiento.

Todas las piezas deben ser inspeccionadas durante la reparación y deben reemplazarse si están gastadas, rajadas o dañadas. Las piezas excesivamente gastadas o dañadas pueden fallar y causar lesiones o la muerte.

Reemplace cualquier letrero dañado o ilegible.

Verifique el trabajo de servicio cuando está completo

Mantenimiento de las hojas de la cortadora

No corra riesgos usando hojas dañadas o dobladas. Los fabricantes de cortadoras de césped de la Asociación de Fabricantes de Equipos (Association of Equipment Manufacturers, AEM) y la Asociación de Fabricantes de Equipos para Agricultura (Farm Equipment Manufacturers Association, FEMA) piden que las hojas de cortadoras NO se reutilicen, enderecen, refuercen en su superficie o suelden. Si una hoja rota es arrojada por una cortadora, podrían producirse lesiones graves o la muerte.

Realización de mantenimiento con seguridad

Mantenimiento de las hojas de la cortadora (continuación)

— **¿Cómo están hechas las hojas de la cortadora de césped?** Están hechas acero para resortes de aleación de alta resistencia. Se forjan en caliente y se les da forma para cumplir con las especificaciones individuales del fabricante; luego, se tratan y templan a un estado dúctil, de alta resistencia para reducir la posibilidad de rupturas durante el corte. Las hojas se prueban para garantizar que cumplan con las normas de resistencia, dureza y ductilidad. Si una hoja no cumple con alguna de estas especificaciones, no se utilizará en la cortadora de césped.

— **¿Qué sucede cuando se dobla una hoja de la cortadora?** Se necesita una gran fuerza de impacto para doblar la hoja. Esta fuerza de impacto a menudo resulta en que las hojas se agujerean o marcan. Una vez que una hoja está dañada por un agujero o una marca, es mucho más probable que ocurra una falla de la hoja. Cuando una hoja está gravemente doblada, puede crearse una rajadura microscópica en ella. Enderezar la hoja no quita o repara esta rajadura, sino que puede causar rajaduras adicionales.Tensiones adicionales durante los trabajos de corte pueden resultar en una falla imprevista de la hoja.

— **Evite doblar las hojas.** Contribuya a prevenir que las hojas de la cortadora se doblen o rajen evitando el contacto con objetos sólidos. Las hojas de la cortadora de césped están destinadas a cortar hierba, arbustos, vegetación leñosa y árboles y ramas pequeños. No están diseñadas para entrar en contacto con objetos sólidos como roca, cemento o postes de acero. Inspeccione la zona antes de usar la cortadora. Retire o marque claramente los objetos sólidos y corte alrededor de ellos.

— **Sustituya las hojas dañadas!** Inspeccione las hojas de la cortadora diariamente o después de golpear algún objeto sólido. Si una hoja de la cortadora de césped se daña (está doblada, agujereada, rajada) o desgasta más del 25 por ciento del tamaño original, debe retirarse y sustituirse con una nueva. Siempre use las hojas originales del fabricante. Las hojas de marcas no originales pueden no cumplir con los requisitos de resistencia, dureza y ductilidad del fabricante de la cortadora.

— **No corra riesgos usando hojas dañadas o dobladas.** El uso de una hoja de cortadora dañada o enderezada puede resultar en la ruptura de la hoja y que la hoja sea arrojada hacia el operador o una persona ajena causando una lesión grave o la muerte. El precio de una nueva hoja es bajo en comparación con la posibilidad de una lesión grave que podría resultar de una hoja doblada o rota arrojada por la cortadora

Palabras finales para el usuario

Acaba de terminar de leer el Manual de la cortadora de césped industrial y para agricultura AEM. Es imposible que este manual abarque todas las situaciones de seguridad que se podría encontrar a diario. Su conocimiento de estas precauciones de seguridad y de su cumplimiento de las reglas básicas de seguridad contribuirán a formar un buen juicio en todas las situaciones. Nuestro objetivo es ayudarlo a desarrollar, establecer y mantener buenos hábitos de seguridad para que la operación de una cortadora de césped industrial y para agricultura le resulte más fácil y más segura.

Éste es otro manual de una serie publicada por AEM sobre la operación de maquinaria en condiciones de seguridad. Muchas de las ilustraciones de este manual de seguridad se pueden encontrar y descargar en http://pictorials.aem.org. Para obtener publicaciones adicionales, visite nuestro sitio web en www.safetymaterials.org.

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www.aem.org

INTRODUCTION SECTION

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INTRODUCTION

This Switch Blade is designed with care and built with quality materials by skilled workers. Proper assembly, maintenance, and operating practices, as described in this manual, will help the owner/operator get years of satisfactory service from the machine.

The purpose of this manual is to familiarize, instruct, and train. The Assembly manual instructs the owner/operator in the correct assembly of the Mower using standard and optional equipment. The Parts Listing section is designed to familiarize the owner/operator with replaceable parts on the Mower. This section provides exploded assembly drawings of each mower component illustrating each piece and the corresponding part number.

Careful use and timely service saves extensive repairs and costly downtime losses. The Operation and Maintenance Sections of the manual train the owner/operator how to work the Mower correctly and attend to appropriate maintenance. The Trouble Shooting Guide helps diagnose difficulties with mower and offers solution to the problems.

Safety is of primary importance to the owner/operator and to the manufacturer. The first section of this manual includes a list of Safety Messages, that, if followed, will help protect the operator and bystanders from injury or death. Many of the Safety Messages will be repeated throughout the manual. The owner/operator/dealer should know these Safety Messages before assembly and be aware of the hazards of operating this mower during assembly, use, and maintenance. The Safety Alert Symbol combined with a Signal Word, as seen below, is intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this machine.

⚠ DANGER	Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.
⚠ WARNING	Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.
⚠ CAUTION	Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.
Important	Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

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The simplistic, time-tested design of the Switch Blade® offers its users a fast, efficient, cost-effective method of vegetation maintenance. Designed for tractors with smaller horsepower engines, it is both safe and reliable. Users can depend on the Switch Blade for high production due to faster cutting as well as less maintenance than any other industrial mower on the market today.

The Switch Blade cutter bar features a breakaway system allowing the unit to hinge when obstructed. Also featured is a planetary drive system which allows for smoother operation and cleaner cutting. An efficient motor, decreased in size and weight, helps to increase speed control.

With a two-section front pump, the updated hydraulic system allows the unit to run cooler by eliminating heat, thus running more efficiently. This translates into more cutting power and less machine maintenance. The Switch Blade's proven blade design allows for precision cutting. Built-in rock guards help to minimize blade damage.

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INTRODUCTION

Attention Owner/Operator

BEFORE OPERATING THIS MACHINE:

1. Carefully read the Operator's Manual, completely understand the Safety Messages and instructions, and know how to operate correctly both the tractor and implement.

2. Fill out the Warranty Card in full. Be sure to answer all questions, including the Serial Number of the implement. Mail within 30 days of delivery date of this implement.

NOTE: Warranties are honored only if completed "Owner Registration and Warranty" forms are received by Alamo Group within thirty days of delivery of the implement.

3. Record the Blade Model and Serial Numbers on the Warranty page at the front of the Operator's Manual. Keep this as part of the permanent maintenance file for the implement.

IMPORTANT
For your safety and to guarantee optimum product reliability, always use Genuine ALAMO INDUSTRIAL replacement parts. The use of inferior "will-fit" parts will void Warranty of your ALAMO INDUSTRIAL implement and may cause premature or catastrophic failure which can result in serious injury or death. If you have any questions concerning the repair parts you are using, contact ALAMO INDUSTRIAL, 1502 E. Walnut Seguin, TX 78155 (830) 372-3551.
ALAMO INDUSTRIAL
02925100

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OPERATION SECTION

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OPERATION

ALAMO INDUSTRIAL SWITCH BLADE SICKLE BAR OPERATING INSTRUCTIONS

Alamo Industrial Switch Blade are manufactured with quality material by skilled workers. The Switch Blade is designed for cutting grass and weeds up to 1/2" diameter such as in rights-of-way and roadsides. The Switch Blade is equipped with safety warning decals, protective guards, shields, and other safety features to provide operator and passerby protection, however, no shielding is 100% accurate. ALL safety equipment and safety warning decals must be maintained on the unit in good operational condition at all times.

It is the operator's responsibility to be knowledgeable of all potential operating hazards and to take every reasonable precaution to ensure oneself, others, animals, and property are not injured or damaged by the unit, tractor or a thrown object. Do not operate the unit if bystanders, passersby, pets or livestock are within 300 feet of the unit.

This section of the Operator's Manual is designed to familiarize, instruct, and educate operators to the safe and proper use of the Switch Blade. Pictures contained in this section are intended to be used as a visual aid to assist in explaining the operation of a Switch Blade and are not specific to a Switch Blade. Some pictures may show shields removed to enhance visual clarity. NEVER operate the unit without all safety equipment in place and in good operational condition. The operator must be familiar with the unit and tractor operation and all safety practices before beginning operation. Proper operation, as detailed in this manual, will help ensure years of safe and satisfactory use of the Switch Blade.

READ AND UNDERSTAND THE ENTIRE OPERATING INSTRUCTIONS AND SAFETY SECTION OF THIS MANUAL AND THE TRACTOR MANUAL BEFORE ATTEMPTING TO USE THE TRACTOR AND IMPLEMENT. If you do not understand any of the instructions, contact your nearest authorized dealer for a full explanation. Pay close attention to all safety signs and safety messages contained in this manual and those affixed to the implement and tractor. *OPS-U- 0001*

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2)

PELIGRO Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3)

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1.OPERATOR REQUIREMENTS

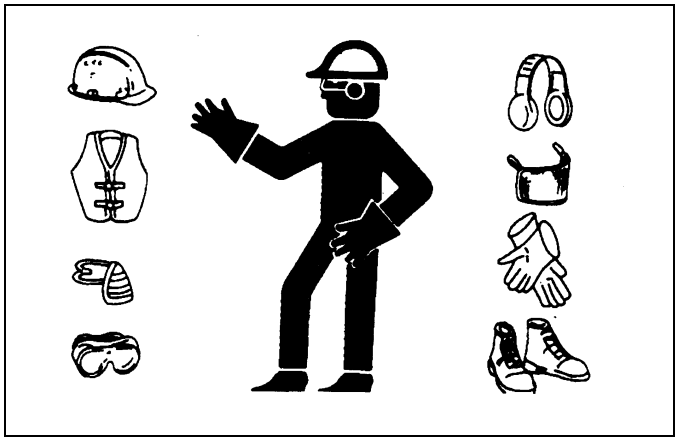
Safe operation of the unit is the responsibility of a qualified operator. A qualified operator has read and understands the implement and tractor Operator's Manuals and is experienced in implement and tractor operation and all associated safety practices. In addition to the safety messages contained in this manual, safety signs are affixed to the implement and tractor. If any part of the operation and safe use of this equipment is not completely understood, consult an authorized dealer for a complete explanation.

If the operator cannot read the manuals for themselves or does not completely understand the operation of the equipment, it is the responsibility of the supervisor to read and explain the manuals, safety practices, and operating instructions to the operator.

Safe operation of equipment requires that the operator wear approved Personal Protective Equipment (PPE) for the job conditions when attaching, operating, servicing, and repairing the equipment. PPE is designed to provide operator protection and includes the following safety wear:

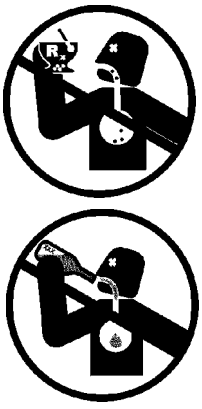
PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Always Wear Safety Glasses
- Hard Hat
- Steel Toe Safety Footwear
- Gloves
- Hearing Protection
- Close Fitting Clothing
- Respirator or Filter Mask (depends on operating conditions) *OPS-U- 0002*



⚠ DANGER

DO NOT use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27)



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OPERATION

2.TRACTOR REQUIREMENTS

The tractor used to operate the mower must have the power capacity to lift, pull, and operate the Power Take Off (PTO) at the mower's rated speed while traveling at a ground speed between 2 and 5 MPH. Operating the mower with a tractor that does not meet the following requirements may cause tractor or mower damage and be a potential danger to the operator and passersby.

Tractor Requirements and Capabilities

- ASABE approved Roll-Over Protective Structure (ROPS) or ROPS cab and seat belt.
- Tractor Safety Devices ..... Slow Moving Vehicle (SMV) emblem, lighting,
- Tractor Horsepower:
  - -Minimum .....25 HP
- Front End Weights..... As needed to maintain 20% weight on front axle
- Power Take Off..... 540 RPM 6-spline or 1000 RPM 21-spline shaft

2.1 ROPS and Seat Belt

The tractor must be equipped with a Roll-Over-Protective-Structure (ROPS) (tractor cab or roll-bar) and seat belt to protect the operator from falling off the tractor, especially during a roll over where the driver could be crushed and killed. Only operate the tractor with the ROPS in the raised position and seat belt fastened. Tractor models not equipped with a ROPS and seat belt should have these life saving features installed by an authorized dealer. *OPS-U- 0003*

⚠WARNING Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. Serious injury or even death could result from falling off the tractor--particularly during a turnover when the operator could be pinned under the ROPS. (SG-7)

2.2 Tractor Safety Devices

If transporting or operating the tractor and implement near a public roadway, the tractor must be equipped with proper warning lighting and a Slow Moving Vehicle (SMV) emblem which are clearly visible from the rear of the unit. Lights and a SMV emblem must be equipped directly on implements if the visibility of the tractor warning signals are obscured.

Maintain all manufacturer equipped safety shields and guards. Always replace shields and guards that were removed for access to connect, service, or repair the tractor or implement. Never operate the tractor PTO with the PTO master shield missing or in the raised position. *OPS-U- 0004*

2.3 Tractor Horsepower

The power required to operate a mower is determined by the tractor PTO horsepower. For most mowing conditions, the Switch Blade mower requires a tractor with at least 25 HP for a 5 and 6 unit. Operating the mower with a tractor that does not have adequate power may damage the tractor engine. Exceeding 25 HP may cause mower damage by overpowering the unit in heavy cutting conditions.

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2.4 Tractor Hydraulics

The Switch Bar is controlled by two levers from the tractor cab. There are two cylinders on the unit one is the “tilt “and “Lift” cylinders. The tilt is used in conjunction with the tilt control lever to control the Up, Lock, Down, or float position. The lift cylinder is used in conjunction with the lift control lever to control the Up, Lock, or Down position. The hydraulic motor is coupled to the tractors cutter drive to give power to the Switch Blade in conjunction with hydraulic circuit to supply full system flow.

⚠WARNING Do not operate this Equipment with hydraulic oil or fuel leaking. Oil and fuel are explosive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the unit ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use Cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15)

2.5 Front End Weight

A minimum of 20% total tractor weight must be maintained on the tractor front end at all times. Front end weight is critical to maintain steering control and to prevent the tractor from rearing up while driving. If the front end is too light, add weight until a minimum of 20% total weight is reached on the front tires. Front weights and weight carriers can be purchased through an authorized tractor dealership. *OPS-U- 0005*

2.6 Power Take Off (PTO)

Depending on the unit, the mower is designed to operate at a PTO speed of 540 or 1000 RPM. Most tractors operate at either 540, or a combination of 540 and 1000 RPM PTO speeds. The operating speed of the mower and tractor can be determined by the number of splines on the driveline yoke and PTO output shaft. Those operating at 540 RPM will have a 6-spline shaft and those operating at 1000 RPM will have a 21-spline shaft or a 1-3/4” 20 spline shaft. Refer to the tractor owner’s manual for instructions to change PTO speeds on models that operate at more than one speed.

If operating an older model tractor where the tractor’s transmission and PTO utilize one master clutch, an over-running clutch must be used between the PTO output shaft and the driveline of the mower. An authorized tractor dealer can provide the over-running clutch and its installation if needed. *OPS-U- 0006*

3.GETTING ON AND OFF THE TRACTOR

Before getting onto the tractor, the operator must read and completely understand the implement and tractor operator manuals. If any part of either manual is not completely understood, consult an authorized dealer for a complete explanation. *OPS-U- 0007*

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⚠WARNING Do not mount or dismount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. (SG-12)

3.1 Boarding the Tractor

Use both hands and equipped handrails and steps for support when boarding the tractor. Never use control levers for support when mounting the tractor. Seat yourself in the operator's seat and secure the seat belt around you.

Never allow passengers to ride on the tractor or attached equipment. Riders can easily fall off and be seriously injured or killed from falling off and being ran over. It is the operator's responsibility to forbid all extra riders at all times. *OPS-U- 0008*

⚠ DANGER Never allow children to operate, ride on, or come close to the Tractor or Implement. Usually, 16-17 year-old children who are mature and responsible can operate the implement with adult supervision, if they have read and understand the Operator's Manuals, been trained in proper operation of the tractor and Implement, and are physically large enough to reach and operate the controls easily. (SG-11)

⚠ DANGER Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)

⚠WARNING Do not mount or dismount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. (SG-12)

3.2 Dismounting the Tractor

Before dismounting, park the tractor and implement on a reasonably level surface, apply the parking brake, idle the engine down, disengage the PTO, and lower the implement to the ground. Shut down the tractor engine according to the operator's manual, remove the key, and wait for all motion to completely stop. Never leave the seat until the tractor, its engine and all moving parts have come to a complete stop.

Use hand rails and steps when exiting the tractor. Be careful of your step and use extra caution when mud, ice, snow or other matter has accumulated on the steps or hand rails. Use all handrails and steps for support and never rush or jump off the tractor. *OPS-U- 0009*

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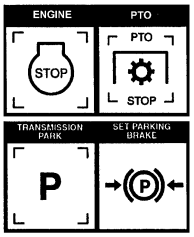
DANGER BEFORE leaving the tractor seat lower the implement, set the parking brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only. (SG-9)



4.STARTING THE TRACTOR

The operator must have a complete understanding of the placement, function, and operational use of all tractor controls before starting the tractor. Review the tractor operator's manual and consult an authorized dealer for tractor operation instructions if needed.
Essential Tractor Controls:

- Locate the light control switch.
- Locate the engine shut off control.
- Locate the brake pedals and the clutch.
- Locate the PTO control.
- Locate the 3-point hitch control lever.
- Locate the hydraulic remote control levers.

Before starting the tractor ensure the following:

- Conduct all pre-start operation inspection and service according to the tractor operator's manual.
- Make sure all guards, shields, and other safety devices are securely in place.
- The parking brake is on.
- The PTO control lever is disengaged.
- The 3-point hitch control lever is in the lowered position.
- The hydraulic remote control levers are in the neutral position.
- The tractor transmission levers are in park or neutral.

Refer to the tractor owner's manual for tractor starting procedures. Only start the tractor while seated and belted in the tractor operator's seat. Never bypass the ignition switch by short circuiting the starter solenoid. After the tractor engine is running, avoid accidental contact with the tractor transmission to prevent sudden and unexpected tractor movement. *OPS-U-0028*

DANGER Never run the Tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SG-23)

DANGER Start tractor only when properly seated in the Tractor seat. Starting a tractor in gear can result in injury or death. Read the Tractor operators manual for proper starting instructions. (SG-13)

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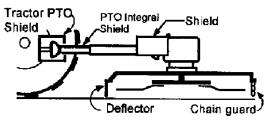
OPERATION

5.PRE-OPERATION INSPECTION AND SERVICE

Before each use, a pre-operation inspection and service of the implement and tractor must be performed. This includes routine maintenance and scheduled lubrication, inspecting that all safety devices are equipped and functional, and performing needed repairs. DO NOT operate the unit if the pre-operation inspection reveals any condition affecting safe operation. Perform repairs and replacement of damaged and missing parts as soon as noticed. By performing a thorough pre-operation inspection and service, valuable down time and repair cost can be avoided. *OPS-U-0029*

⚠WARNING Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)

⚠ DANGER All Safety Shields, Guards and Safety devices including (but not limited to) - the Deflectors, Chain Guards, Steel Guards, Gearbox Shields, PTO integral shields, and Retractable Door Shields should be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. Missing, broken, or worn items must be replaced at once to reduce the possibility of injury or death from thrown objects, entanglement, or blade contact. (SGM-3)



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5.1 Tractor Pre-Operation Inspection/Service

Refer to the tractor operator's manual to ensure a complete pre-operation inspection and scheduled service is performed according to the manufacturers recommendations. The following are some of the items that require daily service and inspection:

- Tire condition/air pressure
- Wheel lug bolts
- Steering linkage
- PTO shield
- SMV sign is clean and visible
- Tractor's lights are clean and functional
- Tractor Seat belt is in good condition
- Tractor ROPS is in good condition
- ROPS is in the raised position
- No tractor oil leaks
- Radiator free of debris
- Engine oil level and condition
- Engine coolant level and condition
- Power brake fluid level
- Power steering fluid level
- Fuel condition and level
- Sufficient lubrication at all lube points
- Air filter condition *OPS-U-0030*

5.2 Sickle Bar Pre-Operation Inspection/Service

Before each Sickle Bar use, a complete inspection and service is required to ensure the Sickle Bar is in a good and safe working condition. Damaged and/or broken parts should be repaired and/or replaced immediately. To ensure the Sickle Bar is ready for operation, conduct the following. *OPS-SB-0001*

⚠WARNING Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)

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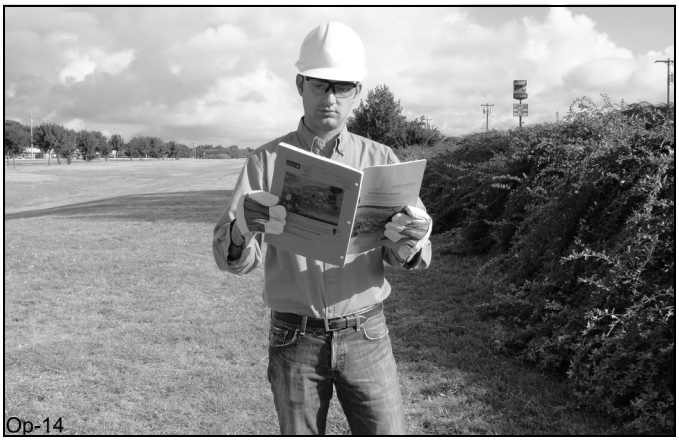
OPERATION

The operator's manual and safety signs affixed on the unit contain important instructions on the safe and proper use of the equipment. Maintain these important safety features on the implement in good condition to ensure the information is available to the operator at all times.

- Ensure the manual canister is secured to the equipment with the operator's manual inside.
- Ensure all safety signs are in place and legible. Replace missing, damaged, and illegible decals. *OPS-U- 0011*


Op-14

FRAME ASSEMBLY

- Inspect condition of mounting frame weldment.
- Inspect condition of Carriage Arm frame.
- Ensure all bolts and screws are in position and are properly torqued.
- Ensure all pins are in place and fastened with screws.
- Ensure frame is properly mounted to tractor and hardware is propely installed and tightened. *OPS-SB- 0002*

Op-188

WARNING Relieve hydraulic pressure prior to doing any maintenance or repair work on the Implement. Place the Mower Head on the ground or securely supported on blocks or stands, disengage the PTO, and turn off the engine. Push and pull the control Levers or Joystick several times to relieve pressure prior to starting any maintenance or repair work. (SBM-6)

WARNING Never Leave the mower unattended while the head is in the raised position. The mower could fall causing serious injury to anyone who might inadvertently be under the mower. (SBM-4)

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SICKLE BAR ASSEMBLY

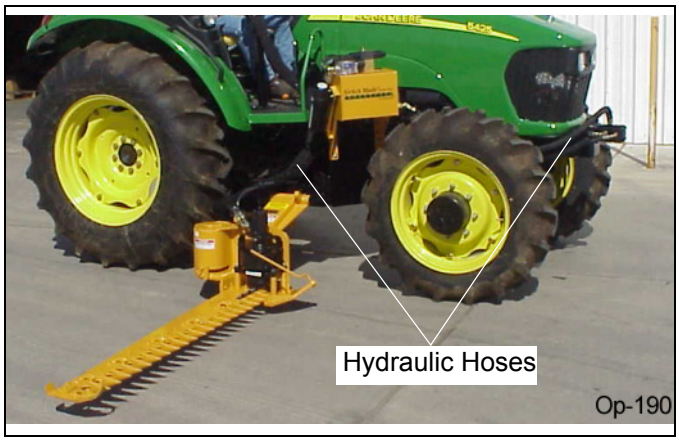
- Inspect condition of Serrated Knifes.
- Inspect condition of Sickle Bar knife guards.
- Ensure all bolts and screws are in position and are properly torqued.
- Ensure all knife clips are in place and fastened with screws.
- Ensure Sickle Bar is properly mounted to frame and tractor and hardware is propely installed and tightened. *OPS-SB- 0003*

Op-189

⚠WARNING Never attempt to lubricate, adjust, or remove material from the Implement while it is in motion or while tractor engine is running. (SG-20)

HYDRAULIC LINE INSPECTION

- Check for hydraulic leaks along hoses, cylinders and fittings. **IMPORTANT**: DO NOT use your hands to check for oil leaks. Use a piece of heavy paper or cardboard to check for hydraulic oil leaks.
- Inspect the condition of the valve weldment.
- Ensure fitting is properly connected *OPS-SB- 0004*



Op-190

⚠WARNING Do not operate this Equipment with hydraulic oil or fuel leaking. Oil and fuel are explosive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the unit ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use Cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15)

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HYDRAULIC PUMP/OIL RESERVOIR

- Check oil reservoir level and oil condition. (Add specific type oil if low)
- Change hydraulic oil filter and hydraulic oil according to maintenance schedule.
- Ensure there are no oil leaks and fitting are properly connected
- Inspect overall condition of hydraulic pump.
- Inspect pump drive shaft.

The oil reservoir has a filter condition gauge located on the filter housing. The filter will show in the red arc when the oil filter needs changing or when the oil temperature is below 100 degrees F. The oil filter should be changed after every 500 hours of operation or when the gauge shows in the red arc when the oil temperature is above 100 degrees F. When changing the filter, also replace the breather filter element (P/N 02974319) located under the black cap. *OPS-SB- 0005*

⚠WARNING Attention: Oil Filler Cap is also the Pressure Relief Cap. Remove cap slowly to relieve pressure before removing cap completely. Stay clear to prevent being scalded with hot oil that may spray out of the tank that is still pressurized and may cause serious injury to eyes, face, and exposed skin. (Ops-0001-MISC)

⚠WARNING Avoid contact with hot surfaces including hydraulic oil tanks, pumps, motors, valves and hose connections. Relieve hydraulic pressure before performing maintenance or repairs. Use gloves and eye protection when servicing hot components. Contact with a hot surface or fluid can cause serious injury from burns or scalding. (SG-34)

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6.DRIVING THE TRACTOR AND IMPLEMENT

Safe tractor transport requires the operator possess a thorough knowledge of the model being operated and precautions to take while driving with an attached implement. Ensure the tractor has the capacity to handle the weight of the implement and the tractor operating controls are set for safe transport. To ensure safety while driving the tractor with an attached implement, review the following. *OPS-U- 0012*

⚠ DANGER

Never operate the Tractor or Implement until you have read and completely understand this Manual, the Tractor Operator's Manual, and each of the Safety Messages found in the Manual or on the Tractor and Implement. Learn how to stop the tractor engine suddenly in an emergency. Never allow inexperienced or untrained personnel to operate the Tractor or Implement without supervision. Make sure the operator has fully read and understood the manuals prior to operation. (SG-4)

⚠ WARNING

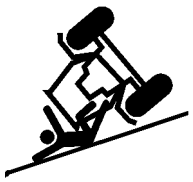
Transport only at speeds where you can maintain control of the equipment. Serious accidents and injuries can result from operating this equipment at high speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.

Before transporting the Tractor and Implement, determine the proper transport speeds for you and the equipment. Make sure you abide by the following rules:

Test the tractor at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum transport speed not to exceed 20 mph (30 kph) for transporting this equipment.

Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that the equipment can be operated at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum turning speed for you and this equipment before operating on roads or uneven ground.

Only transport the Tractor and Implement at the speeds which allow you to properly control the equipment.



Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes or worn tires. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)

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6.1 Starting the Tractor

The procedure to start the tractor is model specific. Refer to the tractor operator's manual for starting procedures for your particular tractor. Consult an authorized dealer if the starting procedure is unclear. Ensure the 3-point control lever is in the lowered position and the PTO is disengaged before starting the tractor. *OPS-U-0033*

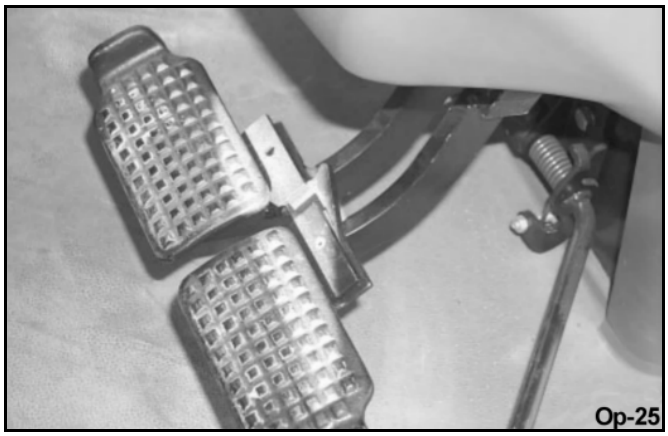
Op-24

⚠ DANGER Never run the Tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SG-23)

6.2 Brake and Differential Lock Setting

Make sure the tractor brakes are in good operating condition. Tractor brakes can be set to operate independently allowing single rear wheel braking action or locked together to provide simultaneous rear wheel braking. FOR MOST DRIVING AND OPERATING CONDITIONS, THE BRAKE PEDALS SHOULD BE LOCKED TOGETHER TO PROVIDE THE MOST EFFECTIVE BRAKING ACTION.

Always disengage the tractor differential lock when turning. When engaged the differential lock will prevent or limit the tractor from turning. During normal cutting conditions, locking the differential provides no benefit and should not be used. *OPS-U- 0013*


Op-25

⚠ WARNING Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes. When operating down a hill or on wet or rain slick roads, the braking distance increases; use extreme care and reduce your speed in these conditions. When operating in traffic, always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy.

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6.3 Driving the Tractor and Switch Blade

Start off driving at a slow speed and gradually increase your speed while maintaining complete control of the tractor and mower. Moving slowly at first will also prevent the tractor from rearing up and loss of steering control. The tractor should never be operated at speeds that cannot be safely handled or which will prevent the operator from stopping quickly during an emergency. If the power steering or engine ceases operating, stop the tractor immediately as the tractor will be difficult to control.

Perform turns with the tractor and implement at slow speeds to determine how the tractor with an attached mower handles a turn. Determine the safe speed to maintain proper control of the tractor when making turns. When turning with an attached implement, the overall working width of the unit is ncreased. Allow additional clearance for the implement when turning.

Op-196

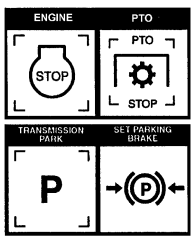
To avoid overturns, drive the tractor with care and at safe speeds, especially when operating over rough ground, crossing ditches or slopes, and turning corners. Tractor wheel tread spacing should be increased when working on inclines or rough ground to reduce the possibility of tipping.

Triumph mowers will cut neat, square corners. It is seldom necessary to raise the cutterbar at corners. Turn quickly when near the end of cut using brake to pivot right-hand wheel of tractor when making turns to the right. When turning corners to the left, run tractor in low gear. The cutterbar swings around faster when turning in this direction and increases the possibility of striking an unnoticed obstacle.

When mowing a ditch, the tip of the cutting bar is in the ditch. When you want to come out, be sure to turn out of the ditch to allow the cutterbar to exit the ditch.

Use extreme caution when operating on steep slopes. Keep the tractor in a low gear when going downhill. DO NOT coast or free-wheel downhill. *OPS-SB-0006*

⚠ DANGER BEFORE leaving the tractor seat lower the implement, set the parking brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only. (SG-9)



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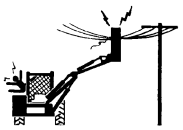
⚠WARNING Never Leave the mower unattended while the head is in the raised position. The mower could fall causing serious injury to anyone who might inadvertently be under the mower. (SBM-4)

⚠ DANGER Always keep a careful lookout and use extreme care when working around overhead obstructions. Never allow the Mower head or boom within 10 feet of any power line. When working close to overhead power lines consult your electric company for a safe code of operation. (SBM-7)



7.OPERATING THE TRACTOR AND IMPLEMENT

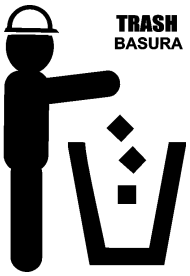
THE OPERATOR MUST COMPLETELY UNDERSTAND HOW TO OPERATE THE TRACTOR AND IMPLEMENT AND ALL CONTROLS BEFORE ATTEMPTING TO OPERATE. The operator must read and understand the Safety and Operation Sections of the implement and tractor operator's manuals. These manuals must be read and explained to any operator who cannot read. Never allow someone to operate the implement and tractor without complete operating instructions.

Before starting any operation, the operator must become familiar with the area to be worked in and any obstacles and hazards contained within to ensure safety to the operator, bystanders, and equipment. Special attention should be paid to foreign debris, rough terrain, steep slopes, and passersby and animals in the area. *OPS-U- 0015*

⚠WARNING Many varied objects, such as wire, cable, rope, or chains, can become entangled in the operating parts of the mower head. These items could then swing outside the housing at greater velocities than the blades. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the cutting area for such objects before mowing. Remove any like object from the site. Never allow the cutting blades to contact such items. (SGM-06)

⚠WARNING Mow at the speed that you can safely operate and control the tractor and mower. The correct mowing speed depends on terrain condition and grass type, density, and height of cut. Normal ground speed range is from 2 to 5 mph(3-8 kph). Use slow mowing speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris and foreign objects are to be avoided. (SGM-07)

⚠WARNING Extreme care should be taken when operating near loose objects such as gravel, rocks, wire, and other debris. Inspect the area before mowing. Foreign objects should be removed from the site to prevent machine damage and/or bodily injury or even death. Any objects that cannot be removed must be clearly marked and carefully avoided by the operator. Stop mowing immediately if blades strike a foreign object. Repair all damage and make certain rotor or blade carrier is balanced before resuming mowing. (SGM-05)



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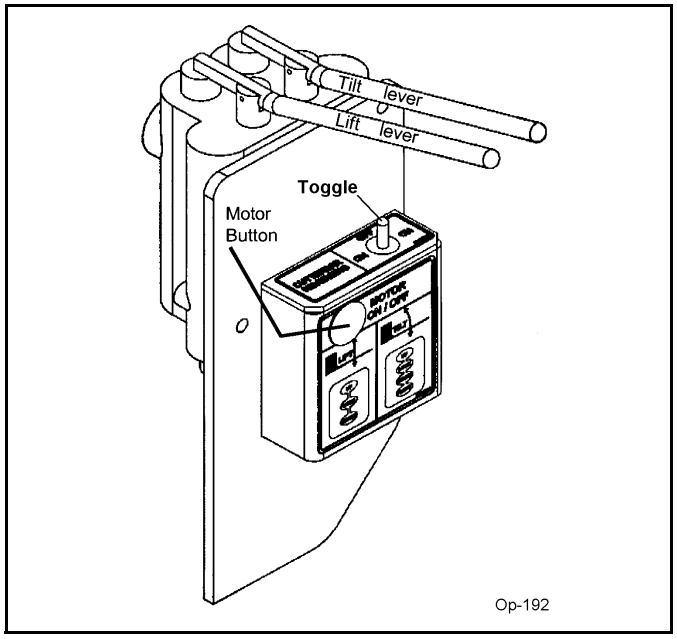
7.1 Position Controls

All operating positions of the mower are controlled with two control valve levers. The 'lift' function control permits selection of Up, Lock, or Down position and the 'tilt' control may be placed in one of four positions; Up, Lock, Down, or Float.

Moving the 'lift' lever up will raise the cutter bar. Release the lever and it will automatically return to the center position to lock the cutter bar into position. Moving the "lift" lever down will lower cutter bar.

Lift the 'tilt' lever and the cutter bar tip will arc up toward the operator. Push down on the tilt control lever and the tip of the cutter bar will rotate down. Release the lever and it will automatically return to center position to lock the cutter bar into position. By pushing the lever all the way down, it will lock into float detent position. This allows the cutter bar to follow the contour of the ground. The tilt function also incorporates an additional feature. If the tilt is lifted to its maximum position, the lift cylinder will engage and fully raise the cutter bar to maximum up position. When the tilt is lowered the bar will automatically return to the same lift height it was. This allows the operator to use one lever to raise the cutter bar to avoid an obstruction such as a utility pole.

If it is necessary to hold the cutter bar in the air (in such conditions as mowing over water, stones, or other debris) the operator should then set the height with the 'lift' control in the hold (center) position and the 'tilt' control in the hold (center) position. The valve incorporates holding components to maintain position.



7.2 MOTOR CONTROL

The motor starts when the button on the control stand is pulled out and tractor engine is running. The motor rotation can be reversed, to clear cutter bar, by moving the toggle switch, located above the motor switch, to the center position, allow the cutter bar to stop and then move the toggle to the other position.

7.3 KNIFE SPEED

Operate the tractor engine at the RPM that will produce 540 PTO RPM. This will produce the proper knife speed for the cutter bar.

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WARNING Many varied objects, such as wire, cable, rope, or chains, can become entangled in the operating parts of the mower head. These items could then swing outside the housing at greater velocities than the blades. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the cutting area for such objects before mowing. Remove any like object from the site. Never allow the cutting blades to contact such items. (SGM-06)

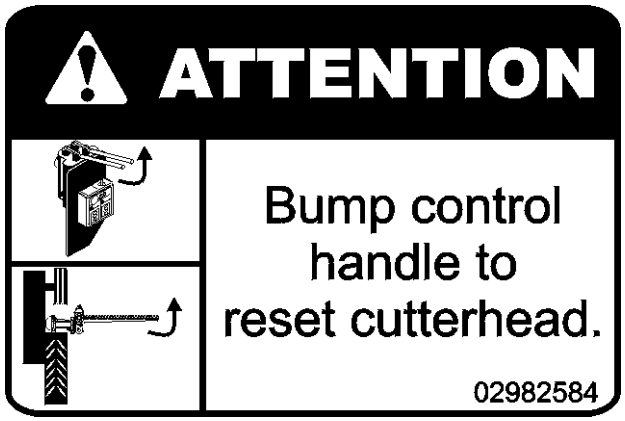
7.4 TRACTOR MOWING SPEED

The best mowing speeds are usually between 1-3 MPH. Conditions will vary with the material being cut and the terrain, but select a speed producing the desired result and maintain that speed. If too much material falls on the cutter bar, increase the ground speed slightly. If grass is being torn out, slow down by switching to a slower gear to allow the knife time to cut clean. If the cutter bar breaks back frequently when cutting heavy dead grass, brush, or vines, slow down to allow the knife time to cut cleanly.

WARNING Mow at the speed that you can safely operate and control the tractor and mower. The correct mowing speed depends on terrain condition and grass type, density, and height of cut. Normal ground speed range is from 2 to 5 mph(3-8 kph). Use slow mowing speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris and foreign objects are to be avoided. (SGM-07)

7.5 CUTTER BAR BREAK-BACK

When the cutter bar strikes an obstruction while traveling forward, it will break back against the rotor actuator. The cutter bar will stay back until you bump the control hand to return it to the cutting position. **NOTE: The Beak-Away System only allows the cutter bar to break back. Do not back the tractor or allow it to roll back with the rear edge of the cutter bar against an obstruction. Severe damage to the carriage or other components may result.**
IMPORTANT: Do not slide the cutter bar past the obstruction. If necessary, back up, adjust the bar to clear the obstacle and proceed with mowing.



If knife jams or stalls on a large branch or other debris, it can often be cleared by moving the cutter bar toggle switch to the off position, waiting until the cutter bar stops, then moving the toggle to the reverse position. This will sometimes clear the jam. If the jam is not cleared, Idle the tractor, stop the tractor engine, and clear the jam by freeing the obstruction manually. Always keep fingers, hands and other body parts clear of cutter bar knife. The knife can move suddenly, even with the tractor engine shut down.

CAUTION Do not back up with this implement. Backing could damage the machine or its components. (S3PT-4)

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⚠WARNING Never interfere with factory-set hydraulic calibrations. Any change in calibration could cause a failure of the equipment and may result in injury. (SBH-13)

7.6 Operating the Switch Blade

Only operate the unit from the tractor operator's seat with the seatbelt securely fastened on a ROPS or cab equipped tractor. The unit is designed for roadside mowing of grass and small weeds. Sharp blades will produce a cleaner cut and require less power. Travel at a speed that allows the mower sufficient time to cut through the vegetation and maintain operating speed to prevent overloading the unit and tractor. Choose a driving pattern that provides the maximum pass length and minimizes turning. Stay alert and watch for trees, low hanging limbs, power lines, and other overhead obstacles and solid ground objects while you are operating.

Avoid mowing in the reverse direction. If the mower must be backed to access an area to cut, make sure there are no persons or other foreign debris behind the tractor and unit before mowing in reverse. When mowing in reverse, operate the tractor and unit at a reduced ground speed to ensure control of the tractor and unit is maintained.

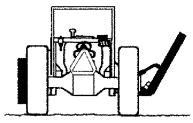
Operators should be aware that sickle bar mowers are precision cutting machines. They are designed to cut like a pair of fine shears but are subjected to the roadside punishment of a bulldozer!

If the mower is not cutting properly, the operator must be prepared to make on-the-job adjustments to assure good cutting and avoid costly repairs. Keep a grease gun, oil can, heavy hammer, screw driver, and proper size wrenches on the tractor at all times. Since most of the day-to-day problems originate in the cutterbar, operators should keep the cutterbar in adjustment and make sure that the knife is sharp. Refer to the service instructions for specific adjustments and information.

To save time, it is recommended that spare knives and rockguards be carried on the tractor for replacement on the job.

Follow the daily lubrication procedures given in the service instructions. Keep all nuts, bolts, and screws tight. A carefully adjusted and maintained mower will make the job easier and reward you with outstanding performance, long life, and reduced maintenance.*OPS-SB- 0007*

⚠WARNING Never leave the mower unattended while the head is in the raised position. The mower could fall causing serious injury to anyone who might inadvertently be under the mower. (SSM-4)



⚠WARNING Do not operate Mower if excessive vibration exists. In the case of extreme vibration, shut down the Mower and the Tractor engine and wait until all motion has stopped. Inspect the Mower to determine the source of the vibration. If any Mower blades are missing or damaged replace them immediately. Operating the Mower with excessive vibration can result in component failure and broken objects could be thrown outward. To reduce the possibility of property damage and personal injury, never allow the Mower to be operated with excessive vibration. (SSM-3)

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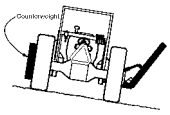
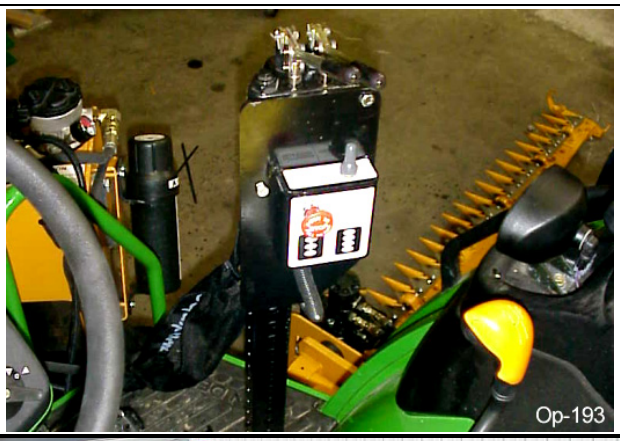
WARNING Maintain adequate tractor stability to prevent lateral instability and possible tip-over which could result in serious bodily injury or even death. Widen the wheel tread and add wheel weights where necessary. Refer to the mounting instructions or call Customer Service if you need assistance with Couterweight Procedure. (SSM-2)



7.7 Shutting Down the Switch Blade

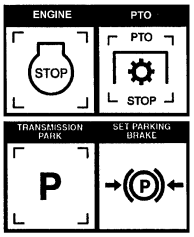
To shut down implement, first bring the tractor to a complete stop. Decrease engine RPM to idle then disengage implement. The implement will come to a complete stop within a suitable amount of time. Do not engage or disengage the implement at a high RPM unless there is an emergency situation.


Op-193

Park the tractor on a level surface, place the transmission in park or neutral and apply the parking brake, shut down the engine, remove the key, and wait for all motion to come to a complete stop before exiting the tractor. *OPS-SB- 0008*

Op-194

DANGER BEFORE leaving the tractor seat lower the implement, set the parking brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only. (SG-9)



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8.TRACTOR AND SWITCH BLADE STORAGE

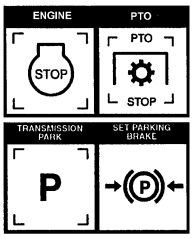
Properly preparing and storing the unit at the end of the season is critical to maintane its appearance and to help ensure years of dependable service. The following are suggested storage procedures:

- Thoroughly clean all debris from unit to prevent damage from rotting grass and standing water.
- Lubricate all grease points and fill oil levels according to the maintenance lubrication schedule.
- Tighten all bolts to the proper torque. Ensure all pins and other hardware are in place.
- Check the unit for worn and damaged parts. Perform repairs and make replacements so that the unit will be ready for use at the start of the next season.
- Store the unit in a clean and dry location.
- Use spray touch-up enamel where necessary on bare metal surfaces to prevent rust and to maintain the appearance of the unit.

OPS-SB- 0009

⚠ DANGER Never allow children to play on or around Tractor or Implement. Children can slip or fall off the Equipment and be injured or killed. Inadvertent contact with controls can cause the Implement to shift or fall crushing themselves or others. (SG-25)

⚠ DANGER BEFORE leaving the tractor seat lower the implement, set the parking brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only. (SG-9)



⚠ WARNING Perform service, repairs and lubrication according to the maintenance section. Ensure the unit is properly lubricated as specified in the lubrication schedule and all bolts and nuts are properly torqued. Failure to properly service, repair and maintain this Implement in good operating condition could cause component failure and possible serious injury or even death. (SG-35)

9.TRANSPORTING THE TRACTOR AND IMPLEMENT

Inherent hazards of operating the tractor and implement and the possibility of accidents are not left behind when you finish working in an area. Therefore, the operator must employ good judgement and safe operation practices when transporting the tractor and implement between locations. By using good judgement and following safe transport procedures, the possibility of accidents while moving between locations can be substantially minimized. *OPS-U- 0017*

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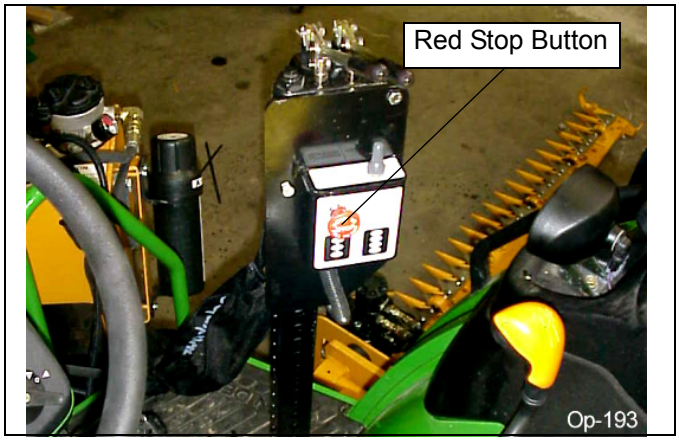
OPERATION

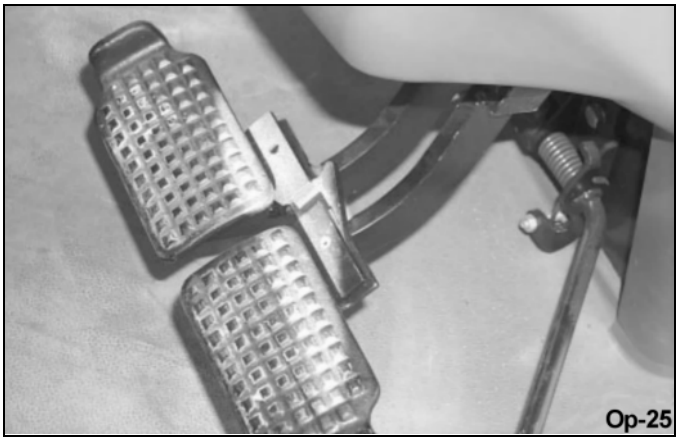
⚠ DANGER Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)

The control valve incorporates load holding components which will keep the bar locked in position. Under normal transport situations, this system will keep the bar in position. However, for added security when transporting over a long distance use the transport safety pins and hair pins provided with the mower. Install as follows:

1. Shut off the mower motor. (Push in red knob) See Page 11 Fig. 4.
2. Raise the cutterbar to the vertical position by fully raising the lift and then the tilt.
3. Shut off the tractor engine.
4. Insert the short carriage transport pin thru the subframe clevis and behind the carriage lug. Insert the hair pin.The boom is now in the transport position. To remove the boom from the Boom Rest, pull the Lift back and raise the boom about 6 inches. Then Swing the boom around to the desired position. *OPS-SB- 0010*



Before transporting the tractor on a public roadway or boarding a trailer for transport, the tractor brake pedals should be locked together. Locking the pedals ensures that both wheels brake simultaneously while stopping, especially when making an emergency stop.
Use extreme caution and avoid hard applications of the tractor brakes when towing heavy loads at road speeds. Never tow the implement at speeds greater than 20 MPH (32 kph). *OPS-U- 0018*



9.1 Transporting on Public Roadways

Extreme caution should be used when transporting the tractor and mower on public roadways. The tractor must be equipped with all required safety warning features including a SMV emblem and flashing warning lights to alert drivers of the tractor's presence. Remember that roadways are primarily designed for automotive drivers and most drivers will not be looking out for you, therefore, you must look out for them. Check your side view mirrors frequently and remember that vehicles will approach quickly because of the tractor's slower speed. Be extremely cautious when the piece of equipment that you are driving, is wider than the tractor tire width and/or extends beyond your lane of the road. *OPS-B- 0014*

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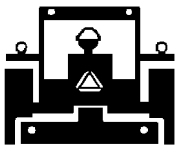
The SMV (Slow-Moving Vehicle) emblem is universal symbol used to alert drivers of the presence of equipment traveling on roadways at a slow speed. SMV signs are a triangular bright orange with reflective red trim for both easy day and night visibility. Make sure the SMV sign is clean and visible from the rear of the unit before transporting the tractor and implement on a public roadway. Replace the SMV emblem if faded, damaged, or no longer reflective. *OPS-U- 0020*

Op-43

⚠ DANGER Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)

⚠ WARNING Make certain that the "Slow Moving Vehicle" (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights and follow all local traffic regulations. (SG-6)



Make sure that all tractor flashing warning lights, headlights, and brake/taillights are functioning properly before proceeding onto public roads. While newer model tractors have plenty of lighting to provide warning signals and operating lighting, most older models where only equipped with operating lights. Consult an authorized tractor dealer for lighting kits and modifications available to upgrade the lighting on older tractor models. *OPS-SB- 0011*

Op-196

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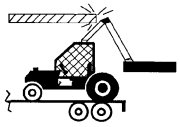
OPERATION

When operating on public roads, have consideration for other road users. Pull to the side of the road occasionally to allow all following traffic to pass. Do not exceed the legal speed limit set in your country for agricultural tractors. Always stay alert when transporting the tractor and mower on public roads. Especially in busy cities be careful that there are no bystanders, poles, large obstructions or any vehicles that may be in path of the mower. Use caution and reduce speed if other vehicles or pedestrians are in the area. *OPS-SB-0012*

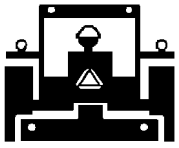
Op-196

⚠ DANGER When transporting Boom Mower on a truck or trailer, the height or width may exceed legal limits when the boom is in the transport position. Contact with side or overhead structures or power lines can cause property damage or serious injury or death. If necessary lower boom to reduce height and/or remove mowing head to reduce width to the legal limits. (SBM-8)

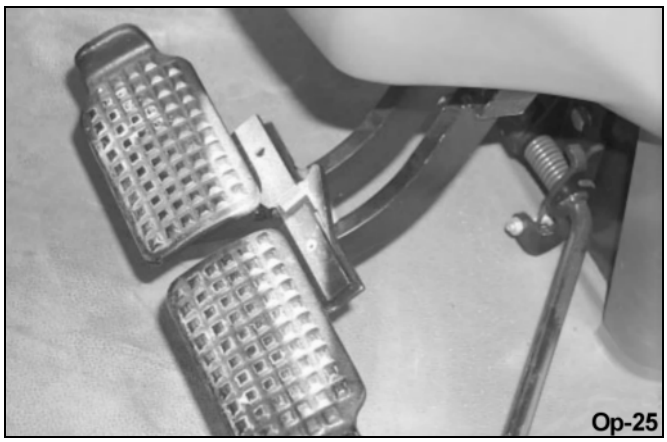


⚠ DANGER Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)

⚠WARNING Make certain that the “Slow Moving Vehicle” (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights and follow all local traffic regulations. (SG-6)



Reduce speed before turning or applying the brakes. Ensure that both brake pedals are locked together when operating on public roads. *OPS-U- 0023*


Op-25

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9.2 Hauling the Tractor and Implement

Before transporting a loaded tractor and implement, measure the height and width dimensions and gross weight of the complete loaded unit. Ensure that the load will be in compliance with the legal limits set for the areas that will be traveled through. *OPS-U- 0024*

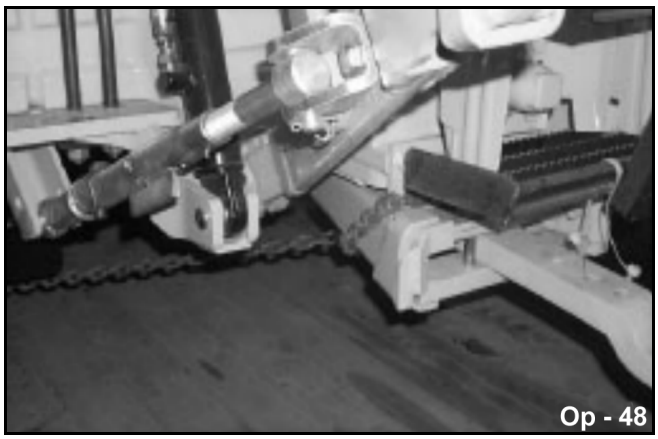
Op - 46

Use adequately sized and rated trailers and equipment to transport the tractor and implement. Consult an authorized dealer to determine the proper equipment required. Using adequately sized chains, heavy duty straps, cables and/or binders, securely tie down both the front and rear of the tractor utilizing the proper tie down locations as specified by the tractor manufacturer. *OPS-U- 0025*

Op-47

Arrange the chains so that when tightened, the chains are pulling downward and against themselves. Carefully tighten the securing chains or other fasteners using boomers or binders to apply maximum tension. Use extreme care when attaching and removing the securing devices as the extreme tension involved when released has the potential to inflict serious injury.

While hauling the tractor and implement, make occasional stops to check that the tractor and implement have not moved or shifted and that the securing chains have maintained tension. If during transport a hard braking, sharp turning, or swerving action was performed, stop at the next safe location to inspect the security of the load. *OPS-U- 0026*


Op - 48

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MAINTENANCE SECTION

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MAINTENANCE

LUBRICATION INFORMATION

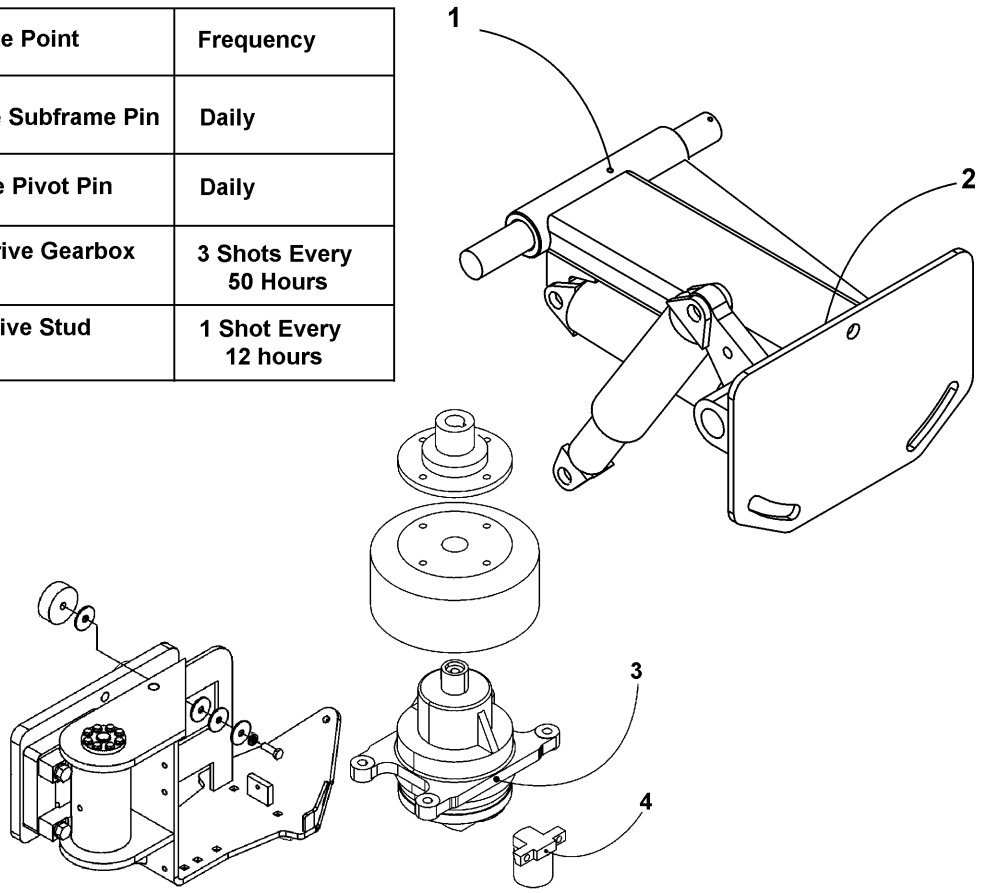
For continued good cutting and trouble-free operation, it is important to follow these instructions accurately.

Shut off the tractor engine and remove key before lubricating the mower.

Greasing: Wipe dirt from grease fittings and grease gun nozzle before greasing. Replace missing or damaged grease fittings immediately. Use a good grade of lithium based #2 grease where grease fittings are provided. Do not over-lubricate. Stop as soon as clean grease emerges from the joint, unless noted other wise below.

This safety alert symbol is used to point out areas requiring precautions for your safety. Failure to observe these warnings could result in injury to you. DO NOT attempt to make adjustments with the mower or tractor running!

Lubricate Point	Frequency
1. Carriage Subframe Pin	Daily
2. Carriage Pivot Pin	Daily
3. Knife Drive Gearbox	3 Shots Every 50 Hours
4. Knife Drive Stud	1 Shot Every 12 hours



MntP-0001

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INITIAL HYDRAULIC SYSTEM CLEANING

After the first 100 hours of operation, or if the filter condition gauge shows in the red area when the oil is above 100°F drain, clean and replace the filter. Replace the oil after 250 hrs of operation. The oil and filter should be changed in the following manner:

1. On a flat clean area, lower the mower to the floor, turn off the tractor, set the park brake and remove key.
2. Remove the magnetic drain plug from the bottom of the reservoir and drain the oil into a catch container. Discard the used oil according to the regulations in your area. Clean off any particles attached to the magnetic drain plug. Reinstall the plug using a paste-type pipe thread sealant suitable for hydraulic use.
3. Remove the suction hose and suction fittings from the tank. Remove the suction screen. (Refer to the Tank Assembly in the parts section). Wash the suction screen in clean solvent and allow to dry thoroughly. Reinstall the suction screen, suction fittings and suction hose using a paste-type pipe thread sealant suitable for hydraulic use.
4. Unscrew the cap from the top of the filter housing. Remove the filter element from the bowl and replace with the new filter element provided with the new unit (P/N 02974310).
5. Fill the reservoir with a good grade of clean universal tractor hydraulic oil (P/N 02966307-5 Gal. Container). Always add oil using a system that filters the oil prior to being added to the tank. Never assume that any oil, even new oil in a new container, is contaminant free. To rapidly fill the tank, remove the filter cartridge from the bowl. Fill the tank until the oil is at the top of the sight gauge. Reinstall the element and screw cap.
6. Start the tractor and check for leaks.

RESERVOIR OIL & FILTER MAINTENANCE

Dirty oil can destroy the hydraulic system. Dirt scores valve spools and cylinder plungers and gouges metal from pump and motor thrust plates, gears, and housings. If mower performance is lagging or system is running hotter, the cause could be oil contamination. The oil reservoir has a filter condition gauge located on the filter housing. The filter will show in the red arc when the oil filter needs changing or when the oil temperature is below 100 degrees F. The oil filter should be changed after every 400 hours or every 12 months of operation or when the gauge shows in the red arc when the oil temperature is above 100 degrees F. When changing the filter, also replace the breather filter element (P/N 02974319) located under the black cap. Refer to Filter Assembly in the parts section. Change the oil every 500 hours or 12 months as described in the above procedure. Use Chevron 1000 THF or an equivalent oil.

NOTE: *Your ambient temperature and operating conditions may require a different viscosity oil. Please contact the oil manufacturer for proper specifications.*

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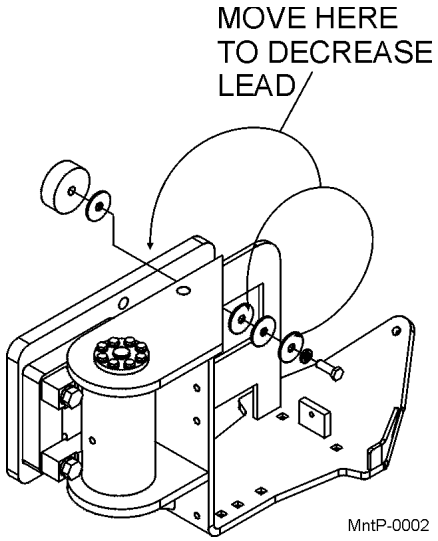
CUTTERBAR ADJUSTMENTS

Lead: The lead angle of the cutter bar is preset at the factory at 3/16" per foot. The lead may be changed, if desired. To reduce the lead, move the washers from the outside of the cutter bar support plate in between the rubber strike pad and plate. See **Image MntP-0002**



MntP-0002

Pitch: The pitch of the cutter bar can be infinitely adjusted ± 15° by loosening the three carriage plate attachment bolts and moving the two bottom bolts in the curved slots.

CUTTERBAR ALIGNMENT

All cutting is done by the knife section passing over the ledger plate in the guard. It is vital that these sections are parallel with ledger plates and in contact with them. See **Image MntP-0003**

The knife should move smoothly in the cutter bar guides and every knife section should rest on the ledger plate to make a shear cut. This means the guards, ledger plates, wear plates, clip and knife head caps must be in good condition and correctly set. If these parts become loose or worn, the knife will flop around in the cutter bar, chewing and tearing instead of cutting.

GUARD ADJUSTMENT

1. To align the guards, the only method provided to accomplish this very important adjustment is to bend the guards into alignment with a hammer. No easier method has been found to adjust heavy duty guards which will stand up in rocky conditions.

NOTE: *Guards are cast from alloy steel. If they are worked too much, they will work harden and cannot be bent. In this case remove the guard from the bar and remove the ledger plate. Heat the guard to a cherry red and cool. This process will anneal the guard enough that it can be bent.*

2. Raise the bar to about 45 degrees. Make sure the knife is at the full retracted position of the stroke so the flywheel doesn't suddenly turn and catch your fingers in the knife. Shut off the engine and set parking brake.

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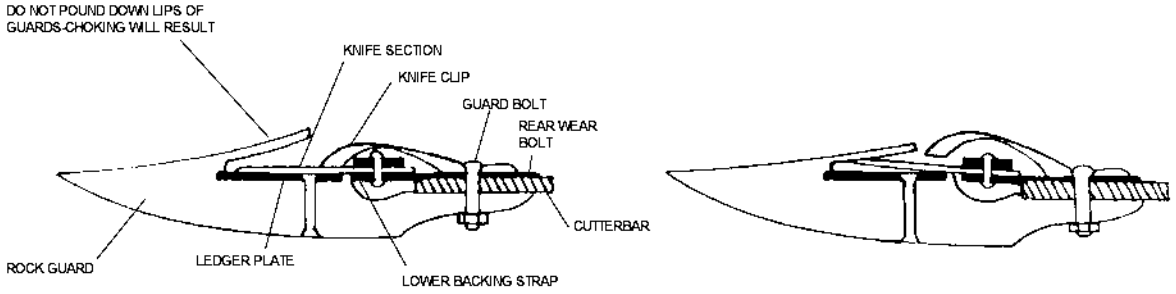

MntP-0003

3. Sight down the bar and look for a knife section in close contact with a guard ledger. If the section to the right and left are both 1/8" if the ledger, DO NOT bend the two side ones up until they contact the knife. This is WRONG! The high guard should be knocked down until all three contact. The higher up a guard gets bent, the more the knife section will tend to contact only the tip.

4. Bolt the guards tight and strike them at the thick part, just in front of the ledger plates. Do not pound down the guards lips as the knife might bind. Retighten the bolts as each guard is aligned. Disregard the position of the guard points. It is the ledger plate which must be kept in line. Blunt points should be filed sharp.

5. Start from the inner shoe, adjust each guard so that the knife section and ledger are parallel and reasonably close to each other. Find the high guard and knock them down. Usually, the only time it is necessary to knock a guard up is when new guards are first installed on the bar.

6. Make certain that the first knife section is contacting the inner shoe ledger plate. If it doesn't contact, check the first or second guard which may be holding the knife up or the inner shoe ledger plate may be worn out.

7. Finally, align the industrial outer shoe in the same way as guards.

WEAR PLATE

The wear plates must line up with each other to give the knife back straight bearing along its entire length. Wear plates should project approximately 1/16" in front of the leading edge of the cutter bar after adjustment. Triumph wear plates are hardened on both edges. After the first edge has worn back, simply turn over the plate to obtain a new wearing surface.

CLIPS

After all guards are adjusted, it is necessary to see that the knife clips are bent down to within 1/64" of the section. The easiest way to check this is to hold the knife down on the ledger plate and use a feeler gauge or the cover of a matchbook to measure the clearance. Do not attempt to hold the knife tightly against the ledger plate with the clips. Knock the clips down with a hammer. A light blow is all that is required. If the clips drag on the knife, pry them up. Drag will bind the knife and wear out the clip very rapidly. See **Image MntP-0004**

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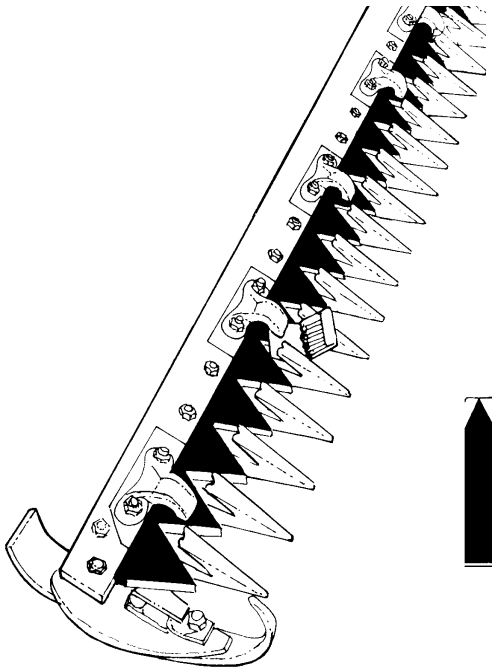

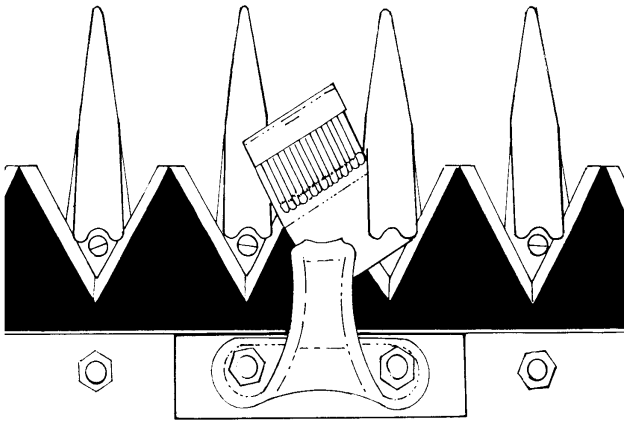

STANDARD HEX HEAD CAP SCREW
S.A.E. GRADE #5

BOLT SIZE	LOAD*	TORQUE
1/4-20	2,000 lbs.	8 ft. lbs.
1/4-28	2,300 lbs.	10 ft. lbs.
5/16-18	3,350 lbs.	17 ft. lbs.
5/16-24	3,700 lbs.	19 ft. lbs.
3/8-16	4,950 lbs.	30 ft. lbs.
3/8-24	5,600 lbs.	35 ft. lbs.
7/16-14	6,800 lbs.	50 ft. lbs.
7/16-20	7,550 lbs.	55 ft. lbs.
1/2-13	9,050 lbs.	75 ft. lbs.
1/2-20	10,200 lbs.	85 ft. lbs.
9/16-12	11,600 lbs.	110 ft. lbs.
9/16-18	13,000 lbs.	120 ft. lbs.
5/8-11	14,500 lbs.	150 ft. lbs.
5/8-18	16,300 lbs.	170 ft. lbs.
3/4-10	21,300 lbs.	270 ft. lbs.
3/4-16	23,800 lbs.	300 ft. lbs.
7/8-9	29,500 lbs.	430 ft. lbs.
7/8-14	32,400 lbs	475 ft. lbs.
1"-8	38,700 lbs	645 ft. lbs.
1"-12	42,300 lbs.	705 ft. lbs.
1"-14	43,300 lbs.	720 ft. lbs.

*Clamp Load lbs. equal to 75% of Bolt Proof Load

METRIC CAP SCREW
GRADE 8.8 = U.S. GRADE #5 (APPROX.)

BOLT SIZE	LOAD*	TORQUE
6 mm R.P.	2,000 lbs.	8 ft. lbs.
6 mm F.P.	2,300 lbs.	10 ft. lbs.
8 mm R.P.	3,350 lbs.	17 ft. lbs.
8 mm F.P.	3,700 lbs.	19 ft. lbs.
10 mm R.P.	4,950 lbs.	30 ft. lbs.
10 mm F.P.	5,600 lbs.	35 ft. lbs.
12 mm R.P.	6,800 lbs.	50 ft. lbs.
12 mm F.P.	7,550 lbs	55 ft. lbs.
14 mm R.P.	9,050 lbs.	75 ft. lbs.
14 mm F.P.	10,200 lbs.	85 ft. lbs.
16 mm R.P.	11,600 lbs.	110 ft. lbs.
16 mm F.P.	13,000 lbs	120 ft. lbs.
18 mm R.P.	14,500 lbs.	150 ft. lbs.
18 mm F.P.	16,300 lbs.	170 ft. lbs.
20 mm R.P.	21,300 lbs.	270 ft. lbs.
20 mm F.P.	23,800 lbs.	300 ft. lbs.

R.P. Regular Pitch
F.P. Fine Pitch

*Clamp Load lbs. equal to 75% of Bolt Proof Load

MntP-0004

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HYDRAULIC SYSTEM

PUMP & MOTOR

The pump and motor is the heart of the hydraulic circuit and is vital to the performance of all Triumph mowers. Worn pumps and motors should be replaced or repaired. It is recommended that most customers replace when this occurs however, spare parts and seal repair kits are available for field repair if desired. ALWAYS DRAIN, CLEAN AND REFILL THE TANK WITH CLEAN OIL when pump repairs are made.

NOTICE: *To avoid possible damage to a new or rebuilt pump, run the tractor engine at very low RPM for about 5 minutes with all control levers in neutral position prior to placing in service.*

VALVES

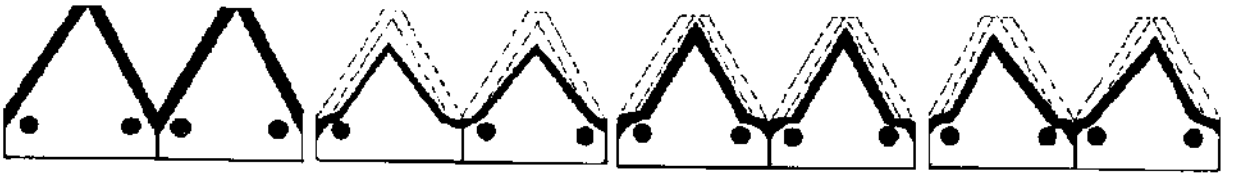
The major cause of valve malfunction is dirty oil or foreign material causing the valve spools to be scored or seals to fail. If repairs are required remove the valve from the system and thoroughly clean all parts before reassembly. Replacement parts and service kits are available. The valve body and spools are match fitted and are not interchangeable or adjustable. Check the valve lever linkage for free movement to allow the detents to locate without binding.

KNIFE REPAIR

ALWAYS USE A SHARP KNIFE. A dull knife cuts poorly, may plug, and doesn't do a clean job. Keep the knife straight with the sections firmly riveted to the knife back. When sharpening the knife, be careful to restore the original shear angle and bevel of 23 degrees. Properly and improperly ground knife sections are shown in the Fig. MntP-0005. A knife section that has been ground several times may have the proper angle and bevel and still be unserviceable because the hard cutting edge has been ground away and the section is too short to cut everything encountered.

KNIFE

Replace worn or broken knife sections. Triumph knife sections are heavy duty sections made of special steel and will stay sharp for many more hours than conventional sections.



New Sections - proper bevel and angle for good work.

Improperly ground sections-narrow bevel and wrong angle which changes the angle of 'shear'.

Sections properly ground even after repeated grinding, proper bevel and angle are retained.

Sections ground off center, destroying the register of blade in guard.

MntP-0005

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LEDGER PLATES

Triumph rock guards use bolt-on ledger plates. It is not necessary to remove the guards from the cutter bar. Follow this simple procedure to remove the ledgers. (Remove the knife from the mower first.)

1. Raise the cutter bar off the ground and block up.
2. Using a punch, drive the bolt from the head end thru the guard. The head will shear off. It is not necessary to remove the nut.
3. Scrape all dirt from the mating face of the guard.
4. Snap in the new ledger and tighten the new bolt and nut. Make sure the ledger is down TIGHT in contact on its bottom face.
5. Stake over or flatten the bolt on the nut side to make sure it does not become loose.
6. Check and tighten the guard-cutter bar attaching bolt.

Inner and outer shoe ledger plates are attached with rivets. These ledgers can also be replaced without removing the shoe.

1. Shear off the old rivets by a sharp blow with a hammer at the edge of the plate.
2. Scrape dirt off the shoe mating face.
3. Install new ledger plate and rivets. Make sure they are TIGHT.

ATTENTION: Loose ledger plates can cause poor cutting and destroy otherwise usable knives, guards, and shoes. KEEP LEDGERS TIGHT.

Cylinder Rod Maintenance

It is important to visually inspect the hydraulic cylinder rods daily before use. It is highly recommended that while the machine is stored or getting very little use that a protectant is applied to the hydraulic cylinder rods to prevent degradation. If the machine receives more frequent use, be sure to fully cycle each cylinder function so that the cylinder rod is coated by the systems hydraulic fluid. Depending on your operating environment it may be necessary, under normal operating conditions, to apply a protective lubricant to the cylinder rods for protection against rust and pitting. Hydraulic fluid may provide a suitable amount of protection, but remember any protectant can attract dust and debris so attention must be given to the cylinder rods daily. Also remember that any other protectant must be compatible with hydraulic fluid. Alamo Industrial is not responsible for rust or pitting of the cylinder rod due to weather exposure or impacts from normal operation or mounting. If hydraulic cylinders and or the cylinder rods are damaged as a result of the rods rusting or pitting, the hydraulic cylinders and rods will not be covered under warranty by Alamo Industrial.

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ALAMO-INDUSTRIAL

LIMITED WARRANTY

1. LIMITED WARRANTIES

1.01. Alamo Industrial warrants for one year from the purchase date to the original non-commercial, governmental, or municipal purchaser ("Purchaser") and warrants for six months to the original commercial or industrial purchaser

1.02. Manufacturer will replace for the Purchaser any part or parts found, upon examination at one of its factories, to be defective under normal use and service due to defects in material or workmanship.

1.03. This limited warranty does not apply to any part of the goods which has been subjected to improper or abnormal use, negligence, alteration, modification, or accident, damaged due to lack of maintenance or use of wrong fuel, oil, or lubricants, or which has served its normal life. This limited warranty does not apply to any part of any internal combustion engine, or expendable items such as blades, shields, guards, or pneumatic tires except as specifically found

1.04. Except as provided herein, no employee, agent, Dealer, or other person is authorized to give any warranties of any nature on behalf of Manufacturer.

2. REMEDIES AND PROCEDURES.

2.01. This limited warranty is not effective unless the Purchaser returns the Registration and Warranty Form to Manufacturer within 30 days of purchase.

2.02. Purchaser claims must be made in writing to the Authorized Dealer ("Dealer") from whom Purchaser purchased the goods or an approved Authorized Dealer ("Dealer") within 30 days after Purchaser learns of the facts on which the claim is based.

2.03. Purchaser is responsible for returning the goods in question to the Dealer.

2.04. If after examining the goods and/or parts in question, Manufacturer finds them to be defective under normal use and service due to defects in material or workmanship, Manufacturer will:

(a)Repair or replace the defective goods or part(s) or

(b)Reimburse Purchaser for the cost of the part(s) and reasonable labor charges (as determined by Manufacturer) if Purchaser paid for the repair and/or replacement prior to the final determination of applicability of the warranty by Manufacturer.

The choice of remedy shall belong to Manufacturer.

2.05. Purchaser is responsible for any labor charges exceeding a reasonable amount as determined by Manufacturer and for returning the goods to the Dealer, whether or not the claim is approved. Purchaser is responsible for the transportation cost for the goods or part(s) from the Dealer to the designated factory.

3. LIMITATION OF LIABILITY.

3.01. MANUFACTURER DISCLAIMS ANY EXPRESS (EXCEPT AS SET FORTH HEREIN) AND IMPLIED WARRANTIES WITH RESPECT TO THE GOODS INCLUDING, BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

3.02. MANUFACTURER MAKES NO WARRANTY AS TO THE DESIGN, CAPABILITY, CAPACITY, OR SUITABILITY FOR USE OF THE GOODS.

3.03. EXCEPT AS PROVIDED HEREIN, MANUFACTURER SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO PURCHASER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS, OR DAMAGE CAUSED OR ALLEGED TO BE CAUSED DIRECTLY OR INDIRECTLY BY THE GOODS INCLUDING, BUT NOT LIMITED TO, ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES RESULTING FROM THE USE OR OPERATION OF THE GOODS OR ANY BREACH OF THIS WARRANTY. NOT WITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, MANUFACTURER'S LIABILITY HEREUNDER FOR DAMAGES INCURRED BY PURCHASER OR OTHERS SHALL NOT EXCEED THE PRICE OF THE GOODS.

3.04. NO ACTION ARISING OUT OF ANY CLAIMED BREACH OF THIS WARRANTY OR TRANSACTIONS UNDER THIS WARRANTY MAY BE BROUGHT MORE THAN TWO (2) YEARS AFTER THE CAUSE OF ACTION HAS OCCURRED.

4. MISCELLANEOUS.

4.01. Proper Venue for any lawsuits arising from or related to this limited warranty shall be only in Guadalupe County, Texas.

4.02. Manufacturer may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.

4.03. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.

4.04. Applicable law may provide rights and benefits to purchaser in addition to those provided herein.

KEEP FOR YOUR RECORDS

ATTENTION: Purchaser should fill in the blanks below for his reference when buying repair parts and/or for proper machine identification when applying for warranty.

Servis-Rhino Implement Model _____ Serial Number _____

Date Purchased _____ Dealer _____

ATTENTION: _____

READ YOUR OPERATOR'S MANUAL

ALAMO INDUSTRIAL
An Alamo Group Company
Post Office Drawer 549
Seguin, Texas 78156
830-379-1480

BC-0002

BC-0002

TO THE OWNER/OPERATOR/DEALER

To keep your implement running efficiently and safely, read your manual thoroughly and follow these directions and the Safety Messages in this Manual. The Table of Contents clearly identifies each section where you can easily find the information you need.

The OCCUPATIONAL SAFETY AND HEALTH ACT (1928.51 Subpart C) makes these minimum safety requirements of tractor operators:

REQUIRED OF THE OWNER:

1. Provide a Roll-Over-Protective Structure that meets the requirements of this Standard; and
2. Provide Seat belts that meet the requirements of this paragraph of this Standard and SAE J4C; and
3. Ensure that each employee uses such Seat belt while the tractor is moving; and
4. Ensure that each employee tightens the Seat belt sufficiently to confine the employee to the protected area provided by the ROPS.

REQUIRED OF THE OPERATOR

1. Securely fasten seat belt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going - especially at row ends, on roads, and around trees.
6. Do not permit others to ride.
7. Operate the tractor smoothly - no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by the tractor manufacturer.
9. When the tractor is stopped, set brakes securely and use park lock, if available.

Keep children away from danger all day, every day...

Equip tractors with rollover protection (ROPS) and keep all machinery guards in place...

Please work, drive, play and live each day with care and concern for your safety and that of your family and fellow citizens.

SWITCHBLADE 5/6 - SOM 03/12 P/N 02982612C
Printed in USA